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ABSTRACT

This manual is intended to assist operational managers in using feedback, goal-setting, and incentive systems. The first section presents background information on feedback, goal-setting, and incentive systems and on measuring productivity. It includes formal definitions of each system, examines the logic of why each system works, compares the expected effects of the three systems, and discusses the development of productivity measures. A section on developing these systems deals with identification of project objectives; design issues; problems and issues common to all three systems; and a recommended implementation strategy. Procedures for documenting the effects of the system are outlined, and examples of feedback, goal-setting, and incentive systems are provided. The final two sections deal with identifying powerful incentives and obtaining further information. Appendixes include incentive attractiveness ratings (by sex, grade, command, marital status, and status with regard to having dependent children) that were obtained from a mail survey administered to 1,522 Air Force personnel. The survey instrument is also appended. (MN)

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AIR FORCE HUMAN RESOURCES LABORATORY

MANAGER'S GUIDE TO THE IMPLEMENTATION OF FEEDBACK, GOAL SETTING, AND INCENTIVE SYSTEMS

Robert D. Pritchard
Karla K. Stuebing
Steven D. Jones
Philip L. Roth
Steven E. Ekeberg

Institute for Organizational Behavior Research
and
Department of Psychology
University of Houston
Houston, Texas 77004

MANPOWER AND PERSONNEL DIVISION
Brooks Air Force Base, Texas 78235-5601

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WILLIAM E. ALLEY, Technical Director
Manpower and Personnel Division

HAROLD G. JENSEN, Colonel, USAF
Commander

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The purpose of this manual is to provide the information necessary for an operational manager to implement feedback, goal setting, and incentive systems in Air Force organizations. The first section of the manual presents background information, including formal definitions of feedback, goal setting, and incentive systems. It also presents the logic for why each system works; compares the three systems as to their expected effects; and briefly discusses how to measure productivity. The second section provides a detailed explanation of how to design and implement these systems. It presents the issues that must be addressed in design and implementation, and discusses the factors that must be considered in resolving these issues. Design issues for each of the three systems are presented, along with a consideration of issues that apply to all three systems. A recommended implementation strategy is also offered. The next section of the manual gives examples of feedback, goal setting, and incentive systems that have been used. These examples are designed to give the reader a sense of how such systems have been applied in varied settings. More detailed information on incentives is presented in the next section. This section describes the results of an effort to comprehensively identify incentives and forms of recognition that would be feasible in Air Force environments. Once identified, these incentives and

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forms of recognition were put in survey form and sent to a random sample of Air Force enlisted personnel. Respondents were asked to indicate the attractiveness of each of the incentives. Attractiveness data from the 1,522 respondents are presented, and responses are analyzed by sex, grade, command, marital status, and presence of dependent children. A brief annotated bibliography is presented for the reader wishing more information about these systems.

SUMMARY

Enhancing productivity is a central concern in the Air Force, as it is in most organizations. To achieve improvements in organizational productivity, a variety of techniques have been proposed. Three of the most researched and written about techniques are feedback, goal setting, and incentives, but most of the published material on these enhancements is technical in nature and addressed to a research-oriented audience. Such material is not typically helpful to operational managers who wish to use feedback, goal setting, and incentives to enhance the productivity of their own organizations.

This manual bridges the gap between the research literature and the needs of operational managers: It offers practical prescriptions for how to design and implement feedback, goal setting, and incentive systems in Air Force organizations.

The first section presents background information on feedback, goal setting, and incentive systems and on measuring productivity. It gives formal definitions; discusses why each system works; and compares the expected effects of the three systems. The main section discusses issues pertinent to the design of each of the three systems. These are presented in the form of a series of design issues that must be resolved. Each issue is presented, and factors to be considered in deciding how to resolve each are discussed.

Also presented is a comprehensive list of incentives and forms of recognition that could be used in Air Force organizations. These were identified by an extensive search of literature and interviews with many different persons inside and outside of the Air Force. The attractiveness of each incentive and form of recognition to a sample of 1,522 Air Force enlisted personnel was determined by a mail survey. The manual presents attractiveness data for each incentive and form of recognition. In addition, the survey responses are broken down by sex, grade, command, marital status, and presence of dependent children. The incentives and forms of recognition and their attractiveness should be useful to managers in deciding which incentives to use in an incentive system. The manual also includes examples of feedback, goal setting, and incentive systems that have been used in other settings, and a description of how to evaluate the effects of such systems.

PREFACE

This is the final technical paper from Contract No. F41689-83-C0039, Enhancing Productivity in Air Force Jobs through Feedback, Goal Setting, and Incentive Systems. Other publications from this contract include AFHRL-TP-86-64, *Organizational Productivity Measurement: The Development and Evaluation of an Integrated Approach*, and AFHRL-TR-87-3, *Feedback, Goal Setting, and Incentives Effects on Organizational Productivity*.

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I. INTRODUCTION

To be as productive as possible, the Air Force must utilize its human resources well. This means good management of personnel. Among the best known and most effective techniques for maximizing motivation are feedback, goal setting, and incentives. Most of what has been written about these techniques is technical and not particularly helpful to commanders and managers who want to apply them in their organizations. The purpose of this manual is to bridge the gap by explaining, in very practical terms, how to design and implement feedback, goal setting, and incentives in Air Force organizations.

Who This Manual Is Intended For

This manual is intended for commanders, managers, and supervisors interested in implementing feedback, goal setting, and/or incentive systems in Air Force organizations. It can also be used by Air Force personnel wishing to learn more about these techniques. It is written for a non-technical audience. No special behavioral science knowledge is necessary to understand and use this manual.

Overview Of Contents

This manual is divided into six sections. The first is background information on feedback, goal setting, and incentive systems. It provides definitions, explains why each system works, and compares the expected effects of the three systems. It covers the importance of properly measuring productivity and discusses general principles for developing high quality productivity measures.

The second section constitutes the heart of the manual. It tells how to design and implement feedback, goal setting, and incentive systems. Issues pertinent to each system are discussed, and a summary of key issues is presented at the end of each discussion. This section also recommends implementation strategies.

The third section describes how to evaluate the implementation of systems such as these. The fourth section gives brief examples of feedback, goal setting, and incentive systems that have been used. The fifth section presents a comprehensive list of incentives and other forms of recognition that could be used in Air Force organizations. Also included in this section are the results of a survey which show the attractiveness of these incentives and forms of recognition to Air Force enlisted personnel. The last section lists sources where further information can be found on productivity measurement, and on feedback, goal setting, and incentive systems.

II. BACKGROUND INFORMATION

This section presents definitions of feedback, goal setting, and incentives. Reasons why each of these productivity enhancements works are also discussed, the three enhancements are compared, and ways of measuring productivity are discussed.

Definitions

Feedback, goal setting, and incentives may be best defined by indicating the key characteristics of each technique.

A GOOD FEEDBACK SYSTEM IS:

Formal: A feedback system for collecting and presenting information uses procedures that have been discussed, agreed to, and planned by job incumbents and supervisors in advance. A feedback system is different from the type of feedback where the boss occasionally tells workers that they are doing a good or poor job. This occasional information is informal feedback and is not what is meant here.

Based on quantitative information about productivity: Information fed back is in the form of numerical data that describe how well a job is being done.

Used with individuals or groups: The feedback system can be used with individuals or with groups such as sections, branches, divisions, etc.

Presented in written form: Feedback information is presented in the form of a feedback report that can be studied and discussed.

Done on a regular, recurring basis: Feedback information is given on a regular basis that is known in advance and expected; e.g., at the end of each month.

A GOOD GOAL SETTING SYSTEM IS:

Formal: A goal setting system for setting and reviewing goals uses procedures that have been discussed and agreed upon in advance by job incumbents and supervisors.

Based on quantitative goals: Goals are set in terms of specific, numerical values rather than in vague terms such as "do as well as possible."

Used with individuals or groups: Goal setting can be used with individuals or with groups, such as sections, branches, divisions, etc.

Used to enhance productivity: Goals are set in terms of how well the individual or group does the job.

Based on goals set in face-to-face sessions between incumbents and managers: Goals are set jointly by the people doing the work and their supervisors.

Done on a regular, recurring basis: Goals are set regularly on an expected, pre-arranged schedule; e.g., once a month.

Reviewed and reset after each performance period: At the end of each performance period (e.g., a month) productivity is reviewed and a new goal set for the next period.

A GOOD INCENTIVE SYSTEM IS:

Formal: An incentive system uses procedures that have been discussed and agreed upon in advance by job incumbents and supervisors. This is in contrast to an informal incentive in which the manager gives an incentive or recognition when he/she thinks it appropriate.

Composed of regularly occurring awards and benefits: Attractive awards and benefits determined in advance are awarded on a regular, predictable basis, such as once a month.

Used with individuals or groups: Incentives can be used with individuals or with groups, such as sections, branches, divisions, etc.

Used to enhance productivity: The awards or benefits from incentives are based on how well the job is done.

Based on pre-defined rules known to all in advance: What it takes to earn incentives and what these incentives will be are known in advance by everyone involved.

Logic of Why Each System Works

In order to implement feedback, goal setting, and incentive systems effectively, it is helpful to understand why they affect people and increase their productivity.

Most managers know that a feedback system which produces regular, positive feedback for a job well done is a valuable management tool, but few use it to its full potential. A formal feedback system gives workers positive feedback on a regular basis. This allows them to work smarter: they know what to focus their efforts on, they can correct mistakes, they can diagnose reasons for problems, and they know when a problem is fixed. In addition, they can be held more accountable for their work, and they know it. They know that management cares about what they are doing. Finally, feedback encourages pride in accomplishment and permits constructive competition.

Goal setting works for all the same reasons as feedback, since feedback must be present to conduct goal setting. In addition, goal setting works because workers know the level of performance that is expected of them. Having something to shoot for is motivating, as is the public commitment to attain the goal.

Incentive systems work for all the reasons given above for feedback and goal setting, since feedback is always present in an incentive system and since some sort of goal setting is frequently used as well. In addition, incentive systems work because of the attraction of the incentive. In addition to the inherent value of an incentive, those receiving the incentive also get recognition. Getting an incentive carries with it recognition for a job well done. Finally, incentives show that a worker's efforts are appreciated.

Comparison of Feedback, Goal Setting, and Incentive Systems

Managers who contemplate the use of feedback, goal setting, and incentive programs wonder what to expect from their use. Unfortunately, it is difficult to predict exactly what will happen as a result of these programs. Their effects depend on how the systems are designed and on the unique characteristics of the organization in which they are used. However, managers can get some idea of what to expect from the comparison presented in Table 1. These comparative

Table 1. Comparison of Feedback, Goal Setting, and Incentive Systems

Factors	Feedback	Goal Setting	Incentives
Ease of design	Easier	Moderate	Harder
Cost of operation	Low	Low	Higher
Supervisory time needed to operate	Low	Low	Moderate
Expected supervisory reactions	Positive	Positive	Mixed
Expected incumbent reactions	Positive	Positive	Mixed
Ease of changing system once it is operational	Easy	Easy	Difficult
Effects on personnel not in the system	Neutral	Neutral	Negative
Incremental effects on productivity	Strong	Moderate	Small

results show what one may expect in general for each system in terms of such factors as ease of design, cost of operation, etc.

Ease of design

In Table 1, the first factor for comparison is ease of design. As shall be discussed at some length below, the most difficult part of designing any of these three systems is developing a good measure of productivity. In fact, it is so important, that an entire section of this manual is devoted to it. Once a good measure of productivity is completed, most of the work to develop any of these three systems is completed. Although we shall discuss how to get good measures later in the manual, assume for comparison purposes that a good productivity measurement system has been developed and that the systems in place have followed the guidelines proposed later in this manual.

Although most design issues are addressed in developing a measurement system, some must still be addressed to develop a feedback system, but none is particularly difficult. Therefore, a feedback system is relatively easy to design. Goal setting is somewhat more difficult to design since the issues involved are more complex. Incentive systems are substantially more difficult to design than either of the other two since so many very important and hard to resolve issues must be addressed.

Cost of operation

The cost of operating feedback and goal setting systems is fairly low. Preparing feedback reports and keeping track of goals are typically fairly easy to do and require little personnel time. This does not, however, include the cost of developing and maintaining a productivity measurement system, which is necessary for the implementation of all three systems. Collecting and processing data to measure productivity can be time-consuming. The cost of incentive systems varies, depending on the nature of the incentives involved, but the cost of such a system can be substantially more than that of either of the other two systems. Using financial incentives or time off from work can be costly, whereas other incentives, such as formal congratulations by the commanding officer, are less costly.

Supervisory time needed to operate

The amount of supervisory time needed to run a feedback or goal setting system is fairly low once the system is operational. Supervisory time is required to make sure measurement data are being collected and processed, and to meet with unit personnel to review feedback reports and/or set goals. These activities should not be very time-consuming. The only exception to this is if goals are set with individuals. This requires the supervisor to meet with each individual for each performance period (e.g., each month). However, such individual goal setting is not recommended, at least for incumbents. Such programs take up too much supervisory time, and objective measurement of individual productivity is typically too difficult to be done well.

Expected supervisory reactions

Supervisors can be expected to have positive reactions to feedback and goal setting programs that are done well. Supervisors like feedback because it increases productivity. Feedback also makes it easier to see where problems exist and allocate resources on a more objective basis. Feedback can also be used to determine the effects of any improvements made. In addition, feedback helps them counsel problem personnel.

Supervisors like goal setting for the same reasons they like feedback. In addition, goal setting provides them with a tool for motivating personnel. One thing supervisors do not like about goals is that they are held accountable for reaching these goals. This is especially true if they feel they do not have direct control over accomplishing the goals, or if they believe goals are set too high.

Supervisor reactions to incentives are mixed, at best. Most supervisors feel that incentives are unnecessary, that personnel should want to do a good job without incentives. Also, supervisors may find incentives difficult to administer and feel that incentives create problems in units which do not get the incentives. They may also feel that a formal incentive system decreases their power to award an incentive informally when they judge it appropriate. This is not to say that all supervisors are negative toward incentives; some are quite positive. However, one should expect more negative supervisory reactions than positive reactions. Finally, the negative reaction is lessened when incentives are limited to forms of recognition such as trophies, letters of commendation, or other formal recognition.

Expected incumbent reactions

The reactions of incumbents to well-designed feedback and goal setting programs will be very positive, usually even more positive than the reactions of supervisors. Such systems let incumbents know where they stand and add variety to their work. These systems also make both recognition and reprimands more accurate and fair. Incumbents will be mixed in their reactions to incentives but overall, more positive than supervisors. They like being formally recognized for working hard, and like the incentives themselves. Usually, very productive units will like the incentive system, whereas units with lower productivity will not. As with supervisors, some incumbents feel that personnel should not need incentives to do a good job, but the percentage of incumbents who feel this way is much smaller than for supervisors. Finally, some perceptions of inequities in the awarding of incentives are unavoidable.

Ease of changing the system once it is operational

Another point of comparison is the ease of changing the program after it is operational. It is almost always necessary to modify and "fine-tune" an operational system. This is because all possible operational difficulties cannot be anticipated. The question is how difficult it is to make these changes once the system is operational. For feedback and goal setting, such changes are made fairly easily and will generally be accepted by unit personnel because they see the need for the changes. Changes in incentive systems are much more difficult to make, especially if the change increases the difficulty of getting an incentive or alters the type of incentive to be awarded. It is almost impossible to make such changes in incentives without some individuals feeling the change was unfair.

Effects on personnel not in the system

Implementing feedback, goal setting, and incentive systems also affects individuals or units not included in the program. For example, implementation of such programs in one maintenance unit will likely be noticed by other maintenance units. For a feedback or goal setting system, this effect will most likely be neutral. That is, the other units may be interested in what is being done, how it works, and its effects, but they will probably not be overly concerned that they do not have the program themselves. If they feel it is a good program, they may express a desire to have it in their unit, but will typically be patient if it takes some time for that to occur. In contrast, the effects of an incentive program on units not included in the system will most likely be negative. Personnel in the other unit will generally feel resentful that they do not have the opportunity to earn the incentives. They will probably feel this way even though they have mixed feelings about incentives themselves.

Incremental effects on productivity

The final point of comparison is the effects of the three programs on productivity. This comparison is the most difficult, since it depends on so many factors, such as the quality of the measurement system, the quality of the program, the initial level of productivity of the units, etc. The best way to express the expected effects of the three systems on productivity is to indicate the size of the increase that would occur if each were added to the next. Specifically, it can be said that adding a good feedback system to a unit will generally result in a very strong increase in productivity. Adding a goal setting program to the feedback program will produce a further increase in productivity, but not as large as the initial increase due to feedback. Adding an incentives program to feedback plus goal setting will add a small increase in productivity beyond feedback and goal setting.

Development of Productivity Measures

Developing a feedback, goal setting, or incentive system requires a means of measuring the behavior one wants to change. Although this is not intended to be a manual on how to develop measures for use in feedback, goal setting, and incentive systems, some discussion of this important topic is presented. It is assumed that the goal of the program is to improve productivity. This discussion of measures is equally applicable to other behaviors of interest, such as safety and training, but since productivity increase is the most common objective, it will be the primary focus.

Approaches to measuring productivity

There are four primary ways that productivity can be measured. The weakest approach will be presented first, and the discussion will proceed to the best. The weakest method is the *subjective approach*, in which the manager determines the level of productivity of the unit by judgment. The judgment may be based on some objective measures, but the final conclusion about the level of productivity is derived from a subjective impression by the manager.

In the *incomplete objective approach*, objective measures are used to determine productivity, but not all important aspects of the work are measured. Typically, measures used are those that are easy to collect, or are already being collected. Although it has serious flaws, this is the most common type of productivity measurement system.

In the *complete objective approach*, a careful attempt is made to get measures of all the important parts of the work, rather than simply those which are easy to measure or are already measured.

The best approach is the *importance-weighted complete objective approach*, which resembles the complete objective approach in that all the important aspects of the work are measured, but goes one step further. This approach takes into account the fact that the various accomplishments of the unit are not equally important. It addresses this issue by weighting different accomplishments according to their importance. The result is that the more important accomplishments count more toward how well the unit is doing than those which are less important. This importance weighting allows the separate measures to be easily combined into a single overall index.

Criteria for a good productivity measurement system

In order to select a good productivity measurement system, a number of factors should be considered. It may not be possible to meet the criteria for a good productivity measurement system in every case, but the criteria point to the issues involved. An important criterion is that the system produce an *overall index* of productivity. Having several measures of different things the unit does is highly useful, but the system should also produce a single value that indicates how well the unit is doing. This is important for motivational purposes. A single index gives unit personnel a picture of their overall productivity improvement or decline. This information is motivating in and of itself. In addition, a single index is valuable for informational purposes. It tells the manager at a glance how the unit is doing. It saves the manager from having to perform the difficult task of translating numerous measures into an overall picture of the unit's productivity.

Another criterion for a good measurement system is that it should provide *subindices* of productivity. That is, in addition to the single overall index, it should provide information on each of the important things the unit does. This is important for feedback purposes. Information on each of the unit's activities gives incumbents, supervisors, and managers information on where the unit is doing well and where it is not doing so well. This allows managers to decide where changes need to be made, what the priorities should be, and how to allocate resources.

Yet another criterion is that the measurement system should be *valid*. Validity means several things here. First, it means that the system should be *accurate*. The activities that are measured must be those on which the unit should focus. In addition, the measures themselves must accurately reflect how well the unit is doing. Validity also means *completeness*. A good measurement system must measure all the important functions of the unit. If the system measures only some of the important activities of the unit, this creates the potentially very serious problem of improving activities that are measured while not improving activities that are not measured. This can be extremely counterproductive. If the measurement system includes all the important activities of the unit, this problem will not be present. Finally, to be valid, the measurement system must reflect *importance*. The different activities of the unit vary in importance, and their differing importance should be reflected in the productivity measurement system.

An additional criterion for the measurement system is *acceptance*. The system must be accepted by those whose efforts will be measured. They must consider it valid, useful, and worth the trouble to collect the data. If users do not accept the system, it will not be nearly as effective as it could be.

A final criterion is that measurement should allow for *direct comparison across units*. It is desirable for the system to be structured such that a manager can directly compare different units. This facilitates the job of deciding such matters as resource allocation. It also makes it much easier to design goal setting and incentive systems since goals and incentives can be made equivalent for different units.

Comparison of measures to criteria

Four general ways to measure productivity and a series of criteria by which to evaluate such measures have been identified. Table 2 examines the four measurement approaches in terms of the evaluation criteria. The four approaches appear at the top of the table; the evaluation criteria are listed to the left. As shown in the table, the Subjective and Incomplete Objective approaches do not result in an effective overall index. The Subjective approach could produce an overall impression of the unit's productivity, but it would be difficult to obtain on a regular basis. It is possible to get an overall index with the Complete Objective approach by adding the different measures, but it is a weak overall measure since it does not take importance into consideration. The Importance-Weighted Complete Objective approach is designed to generate a single index.

The criterion of subindices is not met by the Subjective approach. It is met only partially by the Incomplete Objective approach because, while there are subindices for those areas measured, there are no subindices for the areas not measured. The last two methods allow for subindices.

The validity of the Subjective approach is low. There is no guarantee that the correct activities are being measured, or that what is being measured is

Table 2. Comparison of Possible Productivity Measures to Criteria

Criteria	Subjective	Incomplete Objectve	Complete Objective	Importance Weighted Complete Objective
Overall Index	No	No	Possible	Yes
Subindices	No	Partially	Yes	Yes
Validity				
Accuracy	Low	Low	High	High
Completeness	Low	Low	High	High
Reflects importance	No	No	No	Yes
Acceptance	Low	Low-Moderate	Moderate	High
Direct comparison	No	No	No	Possible

measured properly. The method does not ensure that all important aspects of the work are included, nor that relative importance is maintained. The Incomplete Objective method is also low in validity. It is not accurate since it does not include all the important unit functions, nor does it incorporate varying importance. The Complete Objective method is a large improvement since it does include all important activities and is thus more likely to be accurate. The most valid approach is the Importance-Weighted Complete Objective approach. It has the validity features of the Complete Objective method, and it also reflects relative importance.

Acceptance of the Subjective method is likely to be quite low. This is primarily because it is seen by the users as low in validity. Acceptance increases as the method becomes more valid.

The last criterion is the ability to give a direct comparison across units. The only method that affords this capability is the last one, and only fairly sophisticated versions of that approach. Methods that allow for direct comparison are described in Pritchard, Jones, Roth, Stuebing, and Ekeberg (1987a) and in Tuttle and Weaver (1986b).

In summary, there are a variety of ways of measuring for feedback, goal setting, and incentive systems. There are four basic approaches, and there are multiple variations within each one. Also, there are a number of criteria against which to evaluate a measurement system. Application of these criteria clearly shows that the Importance-Weighted Complete Objective method is the best measurement approach.

As was indicated above, this manual is not meant to be a guide for developing productivity measurement systems. It does, however, suggest the issues to be considered in deciding the measurement system to use. In addition, some general recommendations are made. The Subjective method should be avoided, and most managers would not consider using it as a basis for formal feedback, goal setting, or incentive systems. The Subjective approach lacks validity, is difficult for unit personnel to accept, and does not give measures on the regular basis needed for formal systems.

Great caution should be used in employing the Incomplete Objective method. The most serious problem with it is that activities not measured are not attended to once the feedback, goal setting, or incentive system is in place. What is attended to are activities that are measured. Using such an incomplete system can, in some cases, do more harm than good. Unfortunately, many managers use such a system because it is easy to develop. One merely collects measures that are readily available and starts a system. Because of its ease of use, there is great temptation to use the Incomplete Objective approach. The question managers contemplating use of this method need to answer, however, is what will happen to the overall functioning of the unit if the activities not measured are given much less attention than they are now. If the answer is that this would create serious problems, this method should not be used. If the unmeasured parts of the work are not very important, the approach could be used. Frequently, however, activities that are difficult to measure, and thus not measured, are some of the most important activities of the unit.

If the decision is made to use the Incomplete Objective approach, the manager should make sure that the resulting measures are good ones. It is not uncommon to find that a selected measure includes components that are very different from what even experienced personnel believe it includes. As a consequence, careful determination should be made of exactly what each measure includes and its appropriateness for use should be carefully assessed.

Developing the best measures of productivity is not always possible because of constraints such as a lack of time or funds. In such cases, the measures used should be compared with the criteria listed above. Knowledge of a measurement system's weaknesses will improve how it is implemented and used.

For those who wish to use more sophisticated approaches to measuring productivity, see Tuttle and Weaver (1986a, 1986b) and Pritchard, et al. (1987a).

III. DEVELOPING FEEDBACK, GOAL SETTING, AND INCENTIVE SYSTEMS

This section describes how to design and implement feedback, goal setting, and incentive systems. It is divided into six sub-sections: (a) identification of objectives; (b) design issues in developing feedback systems; (c) design issues in developing goal setting systems; (d) design issues in developing incentive systems; (e) issues common to designing all three systems; and (f) recommended implementation strategy.

Identification of Objectives

The first issue in designing a system is deciding what one wants to change. This means identifying objectives. Up to now, it has been assumed that the manager wants to change unit productivity, but this may not always be the case. For example, it would be quite feasible to design feedback, goal setting, and incentive systems to increase the effectiveness of training, improve safety, or increase reenlistment. In designing a system, it would also be possible to include some or all of these along with productivity. In any event, the manager must decide exactly what is to be included in the system since that decision guides each subsequent step. In most cases, the objectives will be fairly obvious, but it is worth careful consideration at the start of the design. In the discussion to follow, it is assumed that the ultimate objective is productivity, although the points to be raised apply equally well for other objectives.

Design Issues in Developing Feedback Systems

In order to design a feedback system, a series of questions must be answered. To answer these questions, certain factors should be considered.

1. Who should be involved in the design of the feedback system?

In designing a system, you must decide who will be involved in the design of the feedback system. At one extreme, you could design it without assistance. At the other extreme, the entire chain of command from highest management down to each incumbent could be directly involved. This issue applies to all three systems.

It is very important that lower-level personnel be members of the design team and be heavily involved in the design of the feedback system from the start. There are several reasons for this. First, the people actually doing the work are in the best position to know the specifics of the day-to-day operations. This knowledge is invaluable in designing the system. Secondly, they will be using the system. They will be collecting the information and using the feedback. It is vitally important that they accept the system. The best way to secure their acceptance is to heavily involve them in the system's design. Finally, it has been found that both supervisors and incumbents usually resent programs imposed on them from above. They feel such programs do not take their particular situation into consideration and are designed without the detailed knowledge necessary for the system to fit their needs. Having these personnel involved in the design minimizes this problem.

In fact, it is recommended that both supervisors and incumbents actually constitute the team for designing the system. They should decide the way the system should be developed and operated. Their proposed system would then be presented to higher-level management and they would defend it. If there are disagreements about the program, these would be discussed and agreement negotiated.

The member composition and duties of this design team are important. The members of the team depend on the size of the unit for which the system will be used. In general, it should include incumbents from the lowest level, and personnel from each level of supervision that will be affected by the system. For example, if the system is to be developed for a branch, the design team should include incumbents from the sections, section supervisors, and the branch chief. They would then present the proposed system to the management above the branch.

How far up the management hierarchy to go in getting approval for the system depends on the particular organization. On the one hand, the higher up the hierarchy one gets support for the system, the more powerful the resulting system will be. On the other hand, the higher up, the greater the chances for micro management to occur. The decision is a matter of judgment that should also take into consideration the management style of the particular managers involved and the precedents already set in the organization.

This team would have the responsibility of developing plans for the system(s) in detail, essentially by answering the questions posed in this manual. After agreement by higher management, the team would have the authority and responsibility of implementing and monitoring the program.

This approach of incumbent/supervisor development followed by approval of higher management has several advantages. It ensures quality input and participation of lower-level personnel in system design. It increases the chances of a quality system since these personnel know their unique work situation best. If they design it, it cannot be seen as a system that does not recognize their particular needs. This approach maximizes their sense of ownership of the system. Designing the system and presenting and defending their ideas develops a strong sense of ownership. A quality control check is built into this approach since they must present and defend the system to higher-level management. Any problems can be discussed. The process of discussing differences of opinion about how the system should work opens useful dialogue between managers, supervisors, and incumbents that clarifies unit priorities.

2. *Should a facilitator be used to guide the development of the feedback system?*

In general, it is a good idea to have a person who serves the role of facilitator in the development of the system. This person (a) makes sure the development process proceeds in a timely manner, (b) sees that all the essential people are included in the process, (c) makes sure the design personnel get the information they need, and (d) serves as a moderator/discussion leader in meetings where the system is developed. Although the manager could perform these tasks, it is strongly recommended that someone be charged with the overall responsibility of making the program actually happen.

The selection of a facilitator is very important. In many cases, a person outside the unit who is skilled in group processes (conducting meetings, listening, achieving consensus, etc.) would be ideal. However, it is frequently not feasible to obtain such a person, and someone from inside the unit must be selected. Such a person need not be an expert at the work itself since it is the expertise of the supervisors and incumbents that will be used to design the feedback system. It is important, however, that the facilitator have good skills at working with groups. The facilitator should not dominate the group with his/her opinions, but should be able to guide the group so that it makes progress. The facilitator should also be a person who is not so much higher in rank than the design group members that his/her presence inhibits a frank discussion. Finally, the facilitator should be someone who is respected by the design team.

3. *What size unit should the feedback be developed for?*

At one extreme, feedback could be developed such that each individual gets unique feedback about his/her work. At the other extreme, feedback could relate to the work of a large unit, such as a squadron. If feedback is developed for a larger unit, information fed back will concern how the larger unit is performing. For example, for a maintenance squadron (e.g., a component repair squadron), feedback might be provided as to the number of takeoff aborts due to malfunctioning equipment for which the squadron is responsible. Such a measure describes how the squadron as a whole is functioning. It does not indicate how the different branches or sections within the squadron are doing, much less how individuals are performing.

A major question to be resolved in feedback design concerns the size of the unit to be used. To answer this question, several principles must be considered. First, the more the feedback gives productivity information about how individuals are doing their work, the greater will be its positive effects on productivity. This means, for example, that feedback about the productivity of small units within a section will be more powerful than feedback about branch or squadron productivity. This is because feedback for the activities of a large unit have little meaning for individuals in that unit. It is certainly likely that feedback indicating that the squadron is doing well can give individuals a sense of pride. This is, of course, valuable. However, since a given individual probably had very little to do with a measure as broad as squadron-level aborts, that person cannot take much credit for it. Also, the person does not know if his/her individual contribution was good or not. It is lost in the generality of the overall measure.

In contrast, if the measure is for the work of a small unit, individuals are much more likely to feel a sense of accomplishment when the unit does well. In addition, such factors as feeling accountable, seeing better how to focus efforts, correcting mistakes, and diagnosing reasons for problems all operate more strongly when feedback is closer to the individual.

One can, however, go overboard in making the feedback as close to individual work as possible. For example, there is really no way to identify or obtain measures of the work of individuals who work together as a team to get the work done. In such cases, it is not only difficult but also not desirable to develop feedback at the individual level. If a team of mechanics works together rebuilding a jet engine, this is a team effort; and it would not be desirable or feasible to try to get measures of individual productivity. Thus, the smallest unit that the feedback should be based on is the team.

There is another reason for not taking the feedback system to the individual level. It takes a great deal of effort to design objective measures for a single individual. It is doubly difficult to develop such measures for everyone in the unit. This means that if individual measures were developed, there would be some personnel who did not get feedback, or who got feedback on only part of their activities. The only time such an individual feedback system is really feasible is when everyone in the unit does the same work and there is no interdependent team effort required. A unit composed of data entry personnel who do nothing but keypunch is such an example. However, the number of units in the Air Force that meet these criteria is very small.

Taken together, these factors suggest that feedback should be on the smallest unit possible that does not separate teams that must work together to get the work done. In most cases, this will be the section, or subgroups within the section. In only rare cases will it be individuals.

In addition, there may be situations in which the feedback system contains measures at different organizational levels. This comes about because some measures can be broken down (e.g., to the section level), but others must be based on a broader unit. For example, in a supply branch, the time it takes each section to move property through the warehouse to the base customer is a section-level measure. Another measure is the number of delinquent documents in the branch over a given period. Since there is no way to identify which section caused a delinquent document, this measure cannot be broken down beyond the branch level. It would be appropriate to give each section its feedback on moving property, and also to give the branch its feedback on the number of delinquent documents.

4. *What should be the source of the feedback information?*

The source of feedback information should ultimately be based on the objectives of the unit, as identified and agreed upon by incumbents, supervisors, and management. This task is actually part of productivity measurement. For a complete description of techniques to do this see Tuttle and Weaver (1986a, 1986b), and Pritchard et al. (1987a).

In determining the source of information for feedback, it is extremely important that measures be designed so that they coincide with the unit's objectives. This may sound like an obvious point, but it is not at all obvious in practice. The idea is that whatever the measure is, the unit will attempt to maximize it; therefore, it is crucial that what is maximized is good for the unit. For example, consider designing a feedback system for an Air Force electronic maintenance unit. Here an attempt could be made to get a measure of the quantity of repairs done by the unit. One suggestion for a measure is the number of units repaired divided by the number of personnel available to do repairs. Although this sounds like a good measure at first consideration, it is actually a poor one. The problem is that the amount of equipment to be repaired varies greatly over time. Sometimes there is a large influx of items to be repaired; at other times, there is much less. The mission of the unit, however, is readiness: the ability to meet the demand for repairs. The objective is not to get repairs done with minimum manpower; it is to repair whatever comes in and return it to operational use as quickly as possible. If the measure of units repaired over manpower were used, the unit would do well on the measure by decreasing personnel or by increasing the number of units to be repaired. But, they have no control over number of units to be repaired, and decreasing manpower would be directly counterproductive to their main mission of readiness. Thus, this measure is not at all consistent with the objectives of the unit, even though it seems an appropriate measure at first.

The basic point here is that the designers of the feedback system must ensure what is being measured is exactly what the system is asking the unit to change. It is important to make sure that this change is consistent with unit objectives.

Another important consideration is that the feedback measures used must be under the control of the unit. If the unit is being measured and evaluated on elements which are beyond their control, it is very frustrating to personnel and will decrease the effectiveness of the system.

Measures that the unit does not have control over are typically of two types. The first type is a measure which combines the unit's activities with those of one or more other units. For example, a suggested measure in a maintenance unit was the turnaround time for a malfunctioning part to be removed from an aircraft, repaired, and reinstalled in the aircraft. This was a bad measure since included in the total time was the time that the flightline maintenance unit took to reinstall the part. The repair shop had no control over this.

A second type of measure to be avoided in this regard is one that is influenced by factors that are beyond the unit's control. As discussed earlier, a measure based on the number of parts brought in for repair would be a poor measure, since the unit has no control over how many parts are brought in for repair.

In deciding on measures, those that are easiest are probably those already being collected. However, such existing measures should be carefully evaluated before use, for it is not uncommon for a measure to be misunderstood by unit personnel and management. As the contents of the measure are communicated from one set of personnel to another, and as different personnel rotate through the unit, it is easy for errors to occur and be passed on such that everyone agrees what the measure is, but everyone is in error. For example, unit personnel may mistakenly think that an index of number of units completed is weighted by the difficulty of doing each unit, when in fact the measure is not weighted. Another example would be where a section is unaware that the work of another section is included in a measure that they use. By actually looking at what data go into a measure and how the measure is calculated, system designers can avoid this problem.

It is frequently necessary to collect new measures in addition to those already collected. If this is necessary, care should be taken that the new measures are accurate, are consistent with unit objectives, are activities over which the unit has control, and are fully understood. If the new measures are costly to collect, the cost/effectiveness of their use must be considered.

The best measures are generally those that are objective in nature. However, it is often necessary to include subjective measures in the system since this may be the only way to assess the indicators of productivity. It is frequently better to have an imperfect, subjective measure of an important function of the unit than to ignore that function in the feedback system. Ignoring it can result in the important function getting less attention than it should, while unit personnel focus their attention on less important activities simply because these activities are being measured.

5. *What should be fed back?*

As previously discussed, the information to be fed back by the system should cover all the important functions of the unit, and should be objective whenever possible; there should be an overall index of productivity, as well as subindices for all the important functions.

In addition, feedback should include both "how much" and "how good" information. Information on "how much" tells what the unit has done for the last time period in purely descriptive terms. "How good" information is evaluative in nature and tells how good that level of performance was. For example, to say that items repaired had a 4.3% failure rate over the last month is a purely descriptive statement of what was done. To say that this failure rate is excellent is an evaluative statement that says how good it was.

Information on how much is fairly straightforward. It is the type of information that is typically included in a feedback system. The how good information is typically not included. How good information is valuable because it gives unit personnel a clear idea of what is expected of them. Strange as it seems, unit personnel do not usually know what level of output is expected. Giving information on how good also allows them to know how well they are doing. They know in advance what it takes to be above average, well above average, excellent, etc. This makes the feedback much more valuable to them.

Evaluative, how good information can be included in a feedback system in many ways. For example, supervisors and management can jointly decide what the expected level is for each measure. The expected level of output is viewed as neither especially good nor especially bad productivity. This level would not lead to criticism, nor would it lead to praise. Once this level is established and agreed upon, different levels of evaluation can be established for different levels of output. One method would simply be to agree on levels of output that would be considered unsatisfactory, below average, above average, good, and outstanding. A more sophisticated method of doing this is described in Pritchard et al. (1987a).

6. *How should the feedback be delivered?*

There are several issues involved in the delivery of feedback. One is how frequently feedback should be given. To decide this question two issues should be considered. The first is the timing of the job cycle. That is, how long does it take to do a unit of work? For some work, such as a simple assembly job, the job cycle could be as short as a minute or two. For high-level management jobs, the time to do a unit of work could be months.

The timing of feedback should be determined by the job cycle. Feedback should not be more frequent than the job cycle since information on complete units of work will not be available to be fed back; nor should the delay be so long that many cycles of the job have occurred, thus making the feedback too late to make changes. For example, if it typically takes a week to do a repair job and find out how well the repaired part functioned, feedback once a month would be appropriate. Once a week would be too frequent since only one unit of work would have been completed. Feedback every other month would be too long to wait to see what happened to productivity. If the job cycle is one hour to one day in length, weekly feedback would be appropriate.

The timing of feedback is also contingent upon the feasibility of preparing feedback reports. If, for example, data needed to generate a feedback report cannot be obtained more frequently than once a month, the program will necessarily be limited to monthly feedback. There may also be situations where logistical difficulties do not allow feedback reports to be generated as frequently as the job cycle would indicate. In this case, there must be a trade-off between the decreased effectiveness of the less frequent feedback and the difficulty of preparing reports more frequently.

Another aspect of feedback delivery is the manner of presentation of the feedback. Feedback may be given orally or in written form; and it could be given to the unit by some level of management or generated by the unit personnel themselves. The best approach is to prepare written feedback reports. In this way, involved personnel have a document to refer to and study. Who actually prepares and hands out the reports is not particularly important as long as all levels of management involved receive the report, and it is known that they will be studying it.

Therefore, who gets the feedback is also important. Certainly, all levels of management who have been involved in developing or approving the feedback system should get copies of the report, and they should have been trained in how to read and interpret the data. In addition, it should be made available to all incumbents as well. Frequently, it is logistically difficult and/or costly to give each incumbent a copy of the report. In such cases, it is acceptable to post the report in a common area where all may see it.

It is also important in delivering feedback to include historical data in the feedback report. One good technique is to include data from the previous period (e.g., previous month) along with data from the current period, and show the amount of change between the two sets of data. This allows personnel to readily see improvements or decrements in productivity. Other important historical data is information on productivity over a considerably longer time period. A good approach is to show productivity since the start of the program, in graphic form. For example, the overall productivity of the unit could be plotted by time periods (e.g., by month). This allows one to easily see trends in the productivity of the unit. It also becomes a source of pride for units that are improving.

Whether feedback information should be public or private is another question to be answered. If feedback pertains to individuals, it should be given privately. That is, only the individual and his/her supervisor(s) should be given the report. If feedback pertains to a group, it should be made public. It should be posted in the work area. This creates an even greater desire in the unit to perform well; and, if they are doing well, becomes something enthusiastically shown to visitors.

7. *What should be done with the feedback reports after they are distributed?*

After feedback reports are distributed and studied, there should be a meeting with supervisors and representative incumbents to review the feedback reports. This is a very important part of the feedback process. Higher-level managers who were involved in the approval of the system may want to attend this meeting as well. This will turn out to be a major planning meeting. The feedback report will be evaluated and all will see where productivity increased or decreased. The group should then focus on the reasons for improvement or decrement in each area. The meeting should be conducted as a factfinding exercise, not a search for excuses. The purpose of the meeting is to identify the barriers and facilitators to productivity. In this way, needed changes can be identified and implementation strategies discussed. This meeting can also be used as a planning session, focusing on events that could impact productivity for the next month. If handled properly, these meetings are very powerful, and are very important to the successful operation of the system. They can be very motivating and exciting for the participants, and lead to invaluable improvements in operations.

Summary of feedback design issues

The points raised on designing feedback programs can be summarized as follows.

1. Developing sound measures of productivity is crucial to the design of feedback systems, and great care should be given to this step in the process. There are a number of criteria which are important to the success of a feedback system, and any proposed system should be evaluated in terms of these criteria.
2. Both management and all personnel down to and including incumbents should be heavily involved in the design of the feedback system. How high up the management hierarchy to go with system design and approval depends on the particular organization and is a matter of judgment.
3. Use of a facilitator to guide the process of system development is extremely helpful.
4. The unit to which feedback is given should be as small as possible, as long as existing teams are not divided and productivity measurement is feasible.
5. Feedback should be carefully tied to the objectives of the unit. This must be done with greater care than most people think necessary.
6. Only aspects of the work over which the unit has control should be included in feedback measures.
7. Measures to use for feedback must be carefully evaluated to ensure they are indeed measuring what is intended.
8. The best measures for feedback are generally objective measures, but subjective measures may be included if they are necessary to ensure that all important aspects of the work are measured.
9. Feedback should cover information on all the important functions of the unit.
10. Feedback should include an overall index of unit productivity as well as subindices for each important function.
11. Feedback should include both how much was done and how good that level of output is.
12. The frequency of feedback should be based on the length of the job cycle and feasibility considerations.
13. Feedback should be given in written form.
14. Feedback should be given to all levels of management involved in the feedback process, and be made available to incumbents as well.

15. Feedback should include historical data about the productivity of the unit.
16. Feedback should be private if it gives information on the productivity of individuals, public if it concerns group productivity.
17. After feedback reports are distributed, a meeting should be held to identify what produced improvements or decrements in productivity. A major part of this meeting should include discussions of what changes should be made to further improve operations. Such meetings are very important and can be exciting and motivating experiences.

Design Issues in Developing Goal Setting Systems

As with feedback, there are a series of issues to be addressed in designing goal setting systems. In a general sense, all of the issues for feedback must be addressed for goal setting. That is, to use goal setting, one must first have a feedback system. This is because having people set goals is not effective if they have no way of determining whether they have met the goals. Thus, to design a goal setting system, the issues underlying productivity measurement and designing feedback must first be addressed.

In addition, the principles identified in feedback apply to goal setting as well. That is, the points contained in the above summary should also guide the development of goal setting.

It is also important that the measurement system, the feedback system, and the goal setting system be consistent. This means that what is measured relates to what is fed back, and what is fed back relates to the goals that are set. To ensure consistency, the system designer must plan well ahead. If he/she knows that goals are to be set in specific productivity areas, these activities must be measured and the feedback for them must also be consistent with the goal setting plan. For example, suppose the manager wants each section of a component repair squadron to set goals on the quality of repair. The measurement and feedback systems must be designed such that the contribution of each individual section can be identified separately. If this is not done from the beginning, a considerable amount of wasted effort results.

Along with these general considerations, there are a number of issues directly pertinent to goal setting. These will be considered using the same question and answer format used for feedback.

1. *What measures should goals be set on?*

The issue here is that goals can be set on a variety of different aspects of the work. The system design team must decide exactly what factors will be the basis for goal setting. Two general approaches are possible here. The first is targeted goal setting, which involves a specific aspect of the work that needs significant improvement and must be given special attention. For example, suppose a vehicle maintenance unit has developed a serious backlog of repairs. After studying the problem, it becomes clear that the problem is a lack of sufficiently trained personnel to perform the repairs. A goal setting system could be set up to deal only with this specific issue. It might be limited to measures of how effectively the vehicle maintenance unit trained their unskilled personnel to perform these repairs.

The other type of goal setting system is where goals are set to improve the overall productivity of the unit. The system is not targeted to a specific aspect of the work that is a problem, but to the overall effectiveness of the unit. Although many of the issues and principles discussed are applicable to the targeted type of goal system, it is this second type of overall goal setting that is the focus of concern here. In the material to follow, overall goal setting is what is being discussed.

For overall goal setting, the problem is what to actually set goals on. The most important principle to be observed is that goals must be set on all important aspects of the work. If some important aspects of the work are left out, they may well be ignored and the overall effectiveness of the unit could seriously suffer.

Including all important aspects of the work in the goals system can be done in a variety of ways. It is extremely simple if the measurement system has been designed such that all important aspects of the work are included, and a single index of productivity has been developed. If this is the case, goal setting is simply done on the overall index; that is, the goal is simply to increase the amount of this index. In fact, the ease of adding goal setting (and incentives) is a major advantage of having a single index.

If a single index is not available, another technique is to set goals on each important area separately. Thus, if there were 12 measures that covered all the important aspects of the unit's work, there would be 12 goals set, one for each area. While this approach is feasible, it can become somewhat difficult to administer. It can be difficult to set accurate goals in so many different areas. More importantly, if the unit achieves some of the goals but not others, it is difficult to assess how well they did overall. This is especially difficult when comparing one period to another. If the unit made 8 of the 12 goals last month but only 6 of the 12 this month, it would seem that they did worse. However, it would depend on the relative importance of the areas where they achieved their goals, and the difficulty levels of the goals.

If an overall productivity index is not available, there is another approach which reduces some of the negative features of setting multiple goals. This approach takes each of the measured areas of the unit's work and assigns points to different levels of output. For example, suppose one measure for an inspection unit was the number of aircraft parts not inspected by the end of the week. If none remains to be inspected, the unit receives 50 points. If 1 to 5 parts are left, the unit receives 40 points; if 6 to 10 are left, 30 points; etc. A point system would be developed for each of the unit's measures. To do extremely well in every area might result in a total point value of, for example, 550 points. Once this point system is designed, the unit's goal would be the number of points to be earned for a given time period. The unit might, for example, set a goal of 400 points for a given month. With this method, there is only one goal that is set, and it is clear whether the goal is met or not.

2. *Who should set the goals?*

Participation is important in a goal setting system. The incumbents and supervisors of the unit should be heavily involved in setting the goals. Goals should not be imposed from above. As with overall system design, these personnel know their own unique situation and the factors they must face on a day-to-day basis. Their participation also increases acceptance of the goals. Incumbents and their supervisors should either set goals entirely on their own, or set them and defend them to higher-level management.

3. *How difficult should the goals be?*

The goal setting literature clearly indicates that goals should be set so that they are difficult, but attainable. It is also important that goals be accepted by unit members. In most applications of goal setting, this has meant that goals are set at a difficult level, but not so difficult that unit members do not accept them.

However, applications of goal setting may vary greatly in their interpretation of goals. Some goal setting systems are set up in such a way that the unit is expected to achieve the goals. The goals then become the minimum acceptable performance, and if the goals are not met, unit personnel must explain why. This is very different from the approach where the goals are seen as a challenge to shoot for, rather than a minimum level of performance.

This difference in orientation creates goal setting systems with very different effects. If the unit is expected to achieve the goals, the system deteriorates so that the goals become the minimum acceptable productivity. In such instances, the goals are seen as fairly aversive. Units usually respond to this type of system by attempting to set future goals as low as possible. In addition, there is great reluctance on the part of unit personnel to raising the goals, even if they have been exceeding the goals for months. Finally, this kind of goal system can become a source of only negative consequences for the unit. If they make the minimum acceptable goals, nothing happens. If they fall below them, they are criticized.

In contrast, if the goals are seen as a challenge and the unit is not criticized for missing the goals, a very different goal system results. Unit personnel set harder goals, they increase them when appropriate, and the goals become a source of pride and positive consequences rather than negative consequences.

In deciding how difficult goals should be, the design team must determine which type of goal setting system is desired. It is clear from the above presentation that the challenging goal approach is preferable, but there may occasionally be circumstances where the minimum acceptable approach is preferable. Once the approach for the system is determined, goal difficulty becomes a matter of judgment. Again, unit personnel should be heavily involved in the setting of the goals, especially if the system is to be of the challenging goal type.

4. Should the goals be public or private?

Goals can be public (i.e., both the unit and higher-level management know what the goals are), or they can be private (i.e., set by the unit and not communicated to anyone else).

This private goals approach may seem a bit unusual, but it has its advantages, particularly where there is a tendency for the goals to become the minimum level of acceptable productivity. If unit personnel assume that any goal they set will become the minimum level of productivity acceptable, they will be quite reluctant to set challenging goals. Instead, they will set goals they know they can exceed. The only feasible way to overcome this reluctance is to keep the goals private. In this approach, the unit sets challenging goals, but does not communicate them to anyone up the chain of command. Thus, the unit is not held formally accountable for achieving their goals. The goals motivate unit personnel, and unit personnel know when they have achieved the goal. The motivating effects of goal setting operate for the unit, and the system becomes a source of positive consequences.

The logic of this approach is that increased productivity is the important objective, not whether the unit achieves its precise goals. The purpose of the goal setting system is to help the unit become more productive. If having goals helps the unit become more productive, it is irrelevant whether the unit is achieving its goals. Focusing on the achievement of goals rather than the level of unit productivity is not appropriate, since whether the unit makes its goals is largely a function of the difficulty of the goal. In the private approach, the unit is held accountable only for its level of productivity, not whether it is achieving its goals.

Consequently, goals should be private if the goal system is meant to be the challenging goal type. If the system is designed to be the minimum acceptable productivity type, public goals will be more effective.

5. *For what period of time should goals be set?*

The time period for goal setting should be based on the job cycle and feasibility considerations in the same way that the frequency of feedback is determined. For example, if the feedback report is prepared once a month, goals should be set once a month.

6. *Should goals be reviewed each period?*

It is important that goals be reviewed each period (e.g., each month), in terms of both goal attainment and goal difficulty. Goal attainment should be reviewed in a meeting where reasons why a goal was reached or not reached are discussed. This meeting is very much like the feedback meeting discussed earlier. Unit members should discuss changes in operations to improve productivity and plan how these changes could be implemented.

In addition, the level of goal difficulty should be reviewed each period at the same meeting. The goal system should be designed such that goals can be easily changed. Those who set the goals should be able to change the goals each period if they feel it is necessary. This is important because situations change. The unit's productivity could be improving or dropping in a particular area, indicating the need to set a different goal. Or perhaps personnel might simply want to experiment with using different goals for a month or two. Or they might know that they will be losing several personnel to special exercises for the next month and want to lower the goal to reflect this.

For all these reasons and more, units may want to change their goals frequently. They should be allowed to do so. This makes it clear to them that the system belongs to them and should be responsive to their needs. This increases the attraction and acceptance of the system. As stated above, they should be accountable for their productivity, not what goals they set or whether the goals are achieved.

7. *Should supervisors be trained to do goal setting?*

It is desirable to provide some minimal training for the personnel who will be conducting the sessions where unit personnel set goals. In the private type of goal setting system, this person will probably be the unit supervisor. The training would be done by the project facilitator. It will probably not need to be extensive since the supervisor will have been involved in the design and implementation of the measurement and feedback systems, will have participated in the design of the goal setting system, and therefore, should be quite familiar with the details of the system.

Personnel who conduct goal setting sessions should be trained in what goal setting is and why it works. Both of these topics are covered at the beginning of this manual. If these personnel have not been involved in the design of the system, the design features should be explained to them, as well as the reasons for the decisions. For example, they should understand how incumbents participate in setting goals and why this is necessary. Probably the most difficult part of running a meeting to set goals is allowing lower-level personnel to provide input for decisions. Some supervisors will have such meetings and essentially dictate to the group what the goal is going to be. This is not participation. In their training, supervisors should be warned of this problem and made to understand that incumbents can provide meaningful inputs because they know the unit's operations best. Finally, their training should include what to do if their unit tries to set unreasonable goals. The goals could be unreasonably low or unreasonably high. In either case, the supervisor should stop the meeting and remind the group of the importance of having challenging but attainable goals. If this does not serve to make the goals more reasonable, the supervisor might bring in historical data on the productivity of the group to show them, for example, that the unit has never reached the level of productivity they propose.

8. Once the goal setting system is designed, how should it be implemented?

After the goal setting system is designed, there are a series of steps that are desirable to actually get it going the first time. Supervisors should meet with all incumbents and explain what has gone on so far in the development of the system. Probably many of them will know, since there were incumbent representatives involved in the design; however, it is still worthwhile to make certain that all know what has happened. The nature of the system should be explained, including the way goal setting will be done, the frequency, whether goals are private or public, etc. Incumbents should then be asked to think about what the goal(s) should be for the next time period, and discuss it among themselves. A few days later, the first formal goal setting meeting should be held. This could be done with all incumbents present or, if that is not practical, representative incumbents should be involved and the goals set should be communicated to the rest of the incumbents.

Summary of goal setting design issues

The issues involved in designing goal setting systems may be summarized as follows.

1. A good productivity measurement and feedback system must be designed before goal setting is used.
2. Most of the principles involved in designing feedback systems apply to the design of goal setting as well. These principles are summarized at the end of the feedback section in this manual.
3. If goal setting is to be used, the type and nature of the goals must be considered at the time of measurement development and feedback design.
4. There are two basic types of goal setting systems. The targeted goal approach has goals related to a specific, limited area of unit functioning. An overall goals approach is designed to improve the productivity of the unit in all areas. This manual focuses on the latter, although the principles apply to targeted goal setting as well.
5. For an overall goals approach, goals must be set on all the important functions of the unit. This can be done by having a single index of productivity as part of the measurement system and setting goals based on that overall index. It can also be done by setting goals on each of the unit's important activities. Finally, it can be done using a system where points are assigned to how much the unit does in each area, and the goal is set based on the number of points the unit accumulates.

6. It is important that incumbents and supervisors participate in setting the unit's goals.
7. In general, goal difficulty should be set at a level where the goals are challenging, but attainable.
8. Some goal setting systems are designed such that particular goals are viewed as minimum levels of acceptable productivity. Such systems are generally aversive to the participants and lead to low goals being set. The other type of system is one where it is understood that the unit may not always achieve the goals. The latter type of system is generally superior. Goals tend to be set at more difficult levels, and the system is a source of positive consequences rather than negative consequences.
9. For the second type of goal setting system to be successful in a punitive environment, goals must be private. They must not be reported to personnel outside the unit.
10. Units should not be accountable for whether they make their goals; they should be accountable for their level of productivity.
11. The length of time for which a goal should be set should be based on the same considerations used to determine the frequency of feedback; namely, the length of the job cycle and measurement feasibility.
12. Goal setting should be done on the same time cycle as the feedback reports.
13. Goal attainment should be reviewed each period in a meeting where the reasons for achieving or not achieving the goals are discussed. Changes in operations to improve productivity should also be considered at these meetings.
14. Levels of goal difficulty should also be reviewed each period and goal levels changed if appropriate.
15. There should be some training of the individuals who will conduct the goal setting sessions. They should be trained in what goal setting is and how and why it works, the importance of incumbent participation, and how to ensure that reasonable goals are set by the unit.
16. To start a goals system, supervisors should meet with all incumbents to explain the system and have them consider what the goals should be. After incumbents have had a chance to consider the goals, a meeting should be held to set the first goals.

Design Issues in Developing Incentive Systems

As was the case when goal setting was discussed, the issues for designing measurement and feedback systems apply equally well to designing incentive systems. Measurement and feedback systems are necessary before an incentive system can be used. Personnel must know how productive they are and what level of productivity is necessary to obtain incentives.

In addition to these general issues, the following considerations apply directly to the design and implementation of incentive systems.

1. *What productivity measures should be used as the basis for awarding incentives?*

In discussing feedback and goal setting, it was stressed that all important aspects of the unit's work should be included in the measurement system. This is doubly important for incentive systems. One of the curious features of incentive systems is that the more powerful they are, the more their design flaws are magnified. If an important aspect of the work is omitted in the measurement and a powerful incentive program is used, it is especially likely that the unmeasured part of the work will suffer. The more powerful the incentive program, the more serious the problem. Thus, when using powerful incentives, all important aspects of the work must be included in the measurement system.

In terms of productivity measures, a single index of productivity is particularly useful if incentives are to be used. It is extremely difficult to award incentives when multiple aspects of the work are measured and not combined. The difficulty is in determining the point at which the unit should receive the incentive.

If there is a single index, the incentive is based on that index. If a unit exceeds a specified value in overall productivity, it is awarded the incentive. Another approach is the point system described under goal setting. Here, if the unit achieves a specified number of points, it receives the incentive. There is one feasible method of using incentives with multiple measures. If, for example, the unit had eight measures of their work, a goal level could be established for each area. If the unit exceeded the goal in some specified number of these areas (e.g., six of the eight areas), it would receive the incentive.

2. How many levels of productivity should be defined for incentives?

This question refers to whether there should be a single level of productivity that results in award of an incentive, or multiple levels of productivity that result in differential incentives. The first option is to have a single level of productivity defined, and if the unit reaches it, members get the incentive(s). The other alternative is to have more than one level defined such that at one level of productivity they get one incentive, but at higher levels of productivity they get more or larger incentives. For example, personnel might get a day off if the unit's overall monthly productivity exceeded 650 on an overall measure of productivity. This would be the single-level approach. At the other extreme, personnel could get one hour off if the monthly productivity index exceeded 500, two hours off if it exceeded 525, three hours if it exceeded 550, etc. A middle ground would be a half day off for exceeding 600, and a full day off for exceeding 650.

The advantage of the multiple-level approach is that if the unit exceeds the first level necessary to earn the incentive, unit members are still motivated to perform higher to earn the next level incentive. With the single-level approach, once they exceed the level necessary to earn the incentive, there is no motivation for higher performance to earn more incentives. The disadvantage of the multiple-level approach is that it is difficult to administer. More levels need to be set, the system becomes more complex, and it is more difficult to retain equity across different units.

The best approach seems to be to have two to three productivity levels with increasing incentives. The highest incentive level should be set such that it reflects very high productivity. In this way, the unit always has a very difficult goal to aim for, and there is no problem with the unit stopping improvement efforts when they reach the incentive level.

3. How much influence should unit personnel have in setting the productivity levels necessary to earn the incentives?

As with feedback and goal setting, incumbents and supervisors should be heavily involved in the design of the incentive system and in the setting of incentive levels. However, higher-level management will need to be more directly involved in setting incentive levels than is necessary for feedback and goal setting. Powerful incentives tend to be costly to the operation of the unit; thus, management should have a major involvement in approving those incentives. It is recommended that incentive levels be discussed with supervisors and representative incumbents, but that the ultimate decision be made at whatever level of management is necessary to authorize implementation of incentives. Allowing supervisors and incumbents to make the decision without sufficient authority to actually award the incentives can be disastrous. Also, supervisors are placed in an awkward conflict-of-interest situation. If they set the needed productivity levels too low, the unit receives too many incentives. If they set the levels too high, then their people are not rewarded.

4. *How can productivity levels be set so that they are equitable across units?*

If an incentive system is used for more than one unit, the productivity level needed to obtain the incentives must be comparable across the units. If it is much easier for one unit to get the incentive than it is for another, feelings of inequity result. This can cause serious morale problems.

Unfortunately, there is no easy solution for this problem. What is equitable depends on how one views the situation. For example, one point of view is that it should be equally difficult for one unit to get the incentives as for another. This position implies that if each unit increases its productivity by an equal amount, each should get the incentives. A different position is that this strategy penalizes the higher productivity units. If a unit has been high in productivity, it will be more difficult for that unit to improve the same amount as a unit that started out lower in productivity. Thus, it would be unfair for both units to have to improve the same amount to get the incentive. Since both of these positions are reasonable, it is easy to see why conflicts can develop over the equitable determination of incentive levels.

The best way to deal with this issue seems to be for higher-level management and/or any individual(s) chosen as facilitators to discuss it openly with supervisors and representative incumbents. That is, the problem of setting equitable levels should be raised and discussed. It should be noted that it is a serious issue, and that there is no ideal solution. The only way to really resolve it is to discuss the different opinions as to what is a fair and equitable strategy and have the group reach consensus on what is the fairest way to do it. This approach may not remove all feelings of inequity once the system is operational, but having unit personnel participate in the decisions will minimize the problem.

5. *How can an incentive system be designed so that it is powerful?*

Several features make an incentive system powerful. The most obvious need is that the incentives themselves must be attractive to unit members. If the incentives are not highly attractive, the system will be weak. This issue is dealt with at length later in the manual. There are several less obvious features needed to make an incentive system powerful. For instance, there should be a clear connection between productivity and obtaining the incentive. This means that the rules for awarding incentives must be clear and understood by all. Furthermore, these rules must be followed consistently. For example, suppose that a unit is told that superior performance will lead to being excused from weekend work for one month. If "superior performance" is not clearly defined through group consensus, the system will be weakened. In this example, the rules for awarding the incentives were not clear. If the unit achieves "superior performance" and the incentive is not awarded, there is inconsistency in following the rules. One situation where this could happen is if the unit reached the needed level of performance, but due to an unexpected large influx of work, personnel had to work the following weekend. Indeed, there might be no other choice than to have the unit work over the weekend. However, if arrangements are not made for the unit to have its free weekend very soon, the system will be weakened. The rules for incentives must be clear and applied as consistently as possible.

Probably the greatest threat to the strength of an incentive system is increasing the levels of productivity needed to get incentives after the system is implemented. For example, suppose the incentive for a delivery unit is a picnic for unit personnel and their families if its average delivery time is less than 15 minutes. The system is operational, and the unit improves its productivity so that it meets this goal each month. If management decides that the goal was too easy and changes it to a mean delivery time of 12 minutes, this would seriously weaken the system. In fact, it would probably lead to a serious loss of morale, and could easily lead to a backlash where the unit's productivity sharply decreases.

Management must realize that when a set of rules for incentives is agreed upon, this is a serious commitment that should be changed only for the strongest of reasons. For this reason, it is advisable to have a feedback and/or goal setting system in place for a period of time before starting incentives. This way management can get a clear picture of what the incentive levels should be before the system is implemented.

6. *Is there a difference between incentives and forms of recognition?*

There is considerable difference between incentives and forms of recognition, and they produce different effects. The basic differences between the two are: incentives are repeatable, and they can be given to everyone; this is not true for forms of recognition.

Repeatability means that the incentive can be given again and again, and it will remain powerful. Time off from work will be as valuable the tenth time it occurs as it was the first time. Having a photograph taken with the Wing Commander may be highly valued the first time it occurs, but it decreases in value after that. Thus, time off would be classified as an incentive, whereas the photo would be a form of recognition.

The other factor separating incentives and forms of recognition is the fact that incentives can be given to everyone. All personnel can earn an incentive at the same time, but not all can get a form of recognition. For example, attending a special workshop, attending an Airmen/NCO breakfast, getting time-off from work, or getting a 3-day pass are all things that everyone could receive in the same month. Being chosen as a "Top Worker," the one to meet a visiting dignitary, or the one to represent the work group in a formal briefing are all things designed for only one person. Even if awarded to a group, if only one group can receive it, it is a form of recognition not an incentive. For example, an award for "The Section of the Month" would be a form of recognition, not an incentive.

This distinction is important because incentives and forms of recognition result in very different effects. If the system is designed properly, incentives will increase motivation, whereas forms of recognition will not. The reason for this is that a form of recognition is usually given to only one person or unit out of many. For most individuals, this means that there is really little connection between his/her efforts and obtaining the recognition. In other words, the possibility of obtaining the recognition is so low that it does not influence most people's day-to-day behavior. If the person actually does get the recognition, it loses its power to continue to motivate since additional instances of getting it are less valuable. In contrast, incentives are available to all, and will be equally valuable each time they are awarded. This means that everyone can see a chance to obtain the incentive, and day-to-day motivation is increased.

This is not to say that forms of recognition are not valuable; it is quite the contrary. Individuals and groups very much value receiving forms of recognition. Forms of recognition are concrete manifestations that high productivity is appreciated; they generate a feeling of pride, and can be a positive influence on morale. However, the manager and the design team should not confuse the expected effects of incentives with the expected effects of forms of recognition. In general, soundly developed incentives change behavior while forms of recognition change only attitudes.

7. *What should the incentives be?*

This is a major issue for the design of incentive systems, and this manual will devote an entire section to this question. A comprehensive list of possible incentives along with data on the attractiveness of each, will be presented later.

8. *Should the incentives in the system be individual or group incentives?*

Incentives and forms of recognition can be given to individuals or to groups. These outcomes such as being given time-off, being recognized by the commanding officer, and being relieved of extra duties can be awarded to individuals or to an entire unit. The choice of which to use depends on the measurement and feedback systems. If individual productivity is being measured and fed back, the incentives should be for individuals, and given to individuals. If the measurement and feedback systems are based on group productivity, the incentives should be group-based.

Summary of incentive design issues

The points relevant to designing incentive systems may be summarized as follows.

1. Good productivity measurement and feedback systems should be in place before incentives are used.
2. All important aspects of the work should be included in the measurement system if incentives are used.
3. A single index of productivity is especially desirable if incentives are used.
4. The recommended approach is to have two to three levels of productivity which result in differential incentives.
5. Unit personnel should be involved in setting productivity levels where incentives are awarded, but higher-level management should make the final decision.
6. Making the levels necessary to obtain incentives equitable across different units is a serious and difficult issue. The recommended strategy is to explain and discuss the issue with unit personnel, and have them involved in the decisions for establishing productivity levels.
7. To be powerful, incentive systems must use attractive incentives, and have a clear tie between productivity and obtaining the incentive. This means that the rules for awarding incentives must be clear to all, and they must be followed consistently.

8. The greatest threat to the strength of an incentive system is to raise the level of productivity needed to earn incentive(s) after the system is implemented.
9. It is strongly advised that the measurement and feedback systems be used for a period of time to gain experience with them before incentives are added.
10. Incentives and forms of recognition are very different. Incentives are repeatable and applicable to everyone at the same time, whereas forms of recognition are not.
11. If a system is designed properly, incentives will increase motivation; forms of recognition may not.
12. Although forms of recognition are valuable, system designers should not confuse the motivational effects of incentives with the attitudinal effects of recognition. That is, soundly developed incentives change behavior while forms of recognition change only attitudes.
13. What incentives to use is treated in a later section of this manual.
14. The measurement and feedback systems will determine whether the incentives should be group incentives or individual in nature. If feedback is group-based, incentives should be group incentives. If feedback is directed toward the individual, incentives should be individual incentives.

Problems and Issues Common to All Three Systems

There are a series of problems and issues that may arise in developing and implementing these three systems. These problems and issues will be discussed in the question-and-answer format as before.

1. What if there is resistance to developing these systems?

There will usually be some resistance to developing feedback, goal setting, and incentive systems. This may simply be due in part to the general resistance to change that occurs in any organization. The task of the facilitator or design team is to identify the causes of this resistance. In some cases, it may be concern about the extra work involved to develop the system. Another possibility is concern about the additional paperwork that the program might generate when operational. Issues such as these are fairly easy to deal with. The potential benefits of the program can be explained and the unit personnel assured that the amount of administrative work to develop and run the system will be monitored carefully.

It is more difficult to deal with the fact that most people simply do not want to be evaluated. Although most people would like to have feedback about their work, ideally they would like for the feedback to be known only to them and to no one else. Only when the information is positive would they want anyone else see it. This is a very natural feeling, and a very common one. Unfortunately, people are accountable for their work, and the information must be made available to others, even if it is negative.

People may therefore resist the development and implementation of the system simply because they do not want to be evaluated. Rarely, however, will they admit this is the reason they resist it. Instead, they bring up other issues for why the system should not be used. This creates a problem for the facilitator and/or the design team because no matter what facts or assurances such individuals are given that the issues they raise will be taken care of, they continue to resist the idea. You must be sensitive to this issue and attempt to recognize when the issues that are being raised about the system are legitimate concerns, and when they are really manifestations of the fear of being evaluated. One approach that may help is to simply acknowledge the fears by making it very clear that concerns about being measured are perfectly natural and are a typical consequence of a productivity measurement system. It should also be made clear that such concerns should not stop the development of a system that could improve the functioning of the unit.

2. *Is it important that higher-level management be involved in the system?*

Higher-level management involvement is critical for the success of the system. Obviously, management must approve the use and design of any system. But management involvement goes beyond this. Once the system is operational, it must be clear that higher-level management is paying attention to the information created by the system. They must see the feedback reports, at least in summary form. It should also be clear to unit personnel that management is seeing the information. If this is not the case, it gives the impression that management does not really care what the productivity of the unit is. This can obviously have negative effects on unit productivity. The only exception to this principle is that higher-level management need not know the exact goals that units set for themselves.

3. *How important is the positive feedback aspect of the system?*

This aspect of the system is extremely important whether feedback, goal setting, or incentives are used. This means that you should make it a point to support the positive feedback from the report when warranted. You should frequently attend the meetings where the monthly feedback report is distributed and discussed, for this is an ideal opportunity to express positive feedback. There are, however, situations where the reverse could be true. For instance, a manager could give only minimum attention to the positive features of the feedback report, and focus almost all the attention on the negative. This could be the case even though the report is far more positive than negative. You could point out areas where productivity has dropped since the last month and demand an explanation, even though the actual productivity for both months was quite high.

This type of approach should be avoided. This makes the feedback unpleasant rather than positive. If the unit is actually doing poorly in some area, this certainly should be dealt with. If, however, the unit is doing well, this should be stressed.

4. *How important is competition in these systems?*

Constructive competition can be a healthy way to increase motivation. The competition must, however, be constructive. It is possible to have competition that interferes with needed cooperation. For example, different specialties in flight line maintenance must cooperate with each other in repairing aircraft. If the system maximizes competition, this needed cooperation could suffer.

It is difficult to know in advance what type of system will lead to a healthy or to an unhealthy level of competition. One guideline is that powerful incentives should not be awarded on a competitive basis. For example, suppose there were six sections in the flight line maintenance branch, and the section with the highest productivity each month received a day off. This could easily create inappropriate competition since only one section could receive the incentive. It would be better to design the system such that each section can get a day off if their productivity is high enough.

Another strategy for helping avoid destructive competition with incentives is to have an incentive that is awarded to the larger unit as well. In the example above, there could be a half day off for each section meeting its productivity levels, and another half day off for the entire branch if the branch meets its overall productivity goal. This would create an incentive for the individual sections to cooperate with each other so that everyone could benefit.

In general, the sensitivity of competition depends on the amount of cooperation needed to get the work done. Whenever there is no cooperation necessary, competition is unlikely to lead to problems. If cooperation is needed, competition should be designed with care.

5. *Can units "max out" with these systems?*

Units can "max out" with these systems. That is, a unit can reach a level of productivity beyond which it simply cannot improve. This creates two special problems. First, if the unit is at its maximum productivity level, adding an additional intervention can be a problem. Suppose, for example, a unit had a feedback system and then a goal setting system was added to that. By the end of the goal setting, they might well be at as high a level of productivity as is really possible. At this point, adding incentives that require even higher productivity could easily create problems. It could suggest to the unit that they will continually be asked for higher and higher productivity. This might create a negative reaction to all of the systems. It would be better to not add the incentives, or to add incentives to reward them for their already high level of productivity.

The second problem with having units "max out" is that they could stop receiving the positive feedback. You could easily come to expect this high level of productivity and consider anything less to be substandard. This is very frustrating to unit personnel. In such a situation, it is important to continue to give the unit positive feedback for doing such an excellent job.

6. *Can units "game" the system?*

A feedback, goal setting, or incentive system can be gamed. That is, the unit personnel can find a way to distort the information in order to make themselves look good. The secret to controlling gaming is not to try to design the system such that it cannot be gamed. This is not generally possible. It is far better to design the system in such a way that the unit members do not want to game the system.

The best way to accomplish this is to ensure their involvement in all aspects of the system. If they perceive it as "their system," they will be much less likely to distort it. Equally important is that the system be a valid one. If unit personnel see the system as valid, they will be much less likely to game it.

Summary of problems and issues common to all systems

1. Resistance to developing a feedback, goal setting, or incentive system is natural. The manager must be sensitive to whether

resistance is due to the issues being raised, or whether it is based on an unspoken concern about being evaluated.

2. Higher-level management must be involved in the system once it is operational. They should get and read the feedback reports, and let the unit know that they do.
3. Positive feedback must be given when it is justified. Overstressing the negative aspects of the feedback should be avoided.
4. Although competition can have positive effects, it should be used with care if units need to cooperate with each other to do the work.
5. Award of strong incentives should probably not be done on a competitive basis.
6. Units can achieve levels of productivity that are difficult to surpass. If this is the case, further improvements should not be required (e.g., to get incentives). In addition, management should continue to give positive feedback to the unit and not come to see this high level of productivity as routine.
7. Unit personnel can "game" a feedback, goal setting, or incentive system. The way to minimize this is to maximize the motivation not to game the system rather than try to make the system impossible to game. This is best done by having heavy involvement of unit personnel in system design and by ensuring that the system is valid.

Recommended Implementation Strategy

If one wants to use feedback, goal setting, and incentive systems, a question that must be addressed is the way in which these programs should be implemented. Specifically, in what order should they be done, and what combinations should be used? The order of implementation should be first to develop the measurement system, and then to institute the feedback system. The feedback system should be allowed to operate for at least a few months. This allows time for the inevitable changes in the system to be made before the more complex systems of goal setting and incentives are instituted. In addition, this provides productivity data so that more realistic goals can be set, and productivity levels for incentives more accurately established. Finally, if units reach their maximum with only feedback, or only feedback plus goal setting, the more difficult to design and implement incentive system might not be needed.

Once feedback has been operational for enough time to make necessary revisions to the system, goal setting could be added. After that, incentives could be added to feedback and goal setting.

The recommended sequence for implementing these programs is to start with feedback and operate it until no more revisions are needed. Next, add goal setting. Operate goal setting until productivity is no longer increasing. If that level of productivity is near the maximum possible, do not institute incentives. If greater gains in productivity seem possible, consider adding incentives.

IV. HOW TO DOCUMENT THE EFFECTS OF THE SYSTEM

It is frequently desirable to document the effects of a system designed to increase productivity. Documentation allows for an unambiguous evaluation of the program that goes beyond subjective impressions. Such an evaluation can be useful to convince higher-management or base visitors of the success of the program. It can also be useful in deciding whether to implement the program more broadly.

In order to evaluate a program properly, three features are highly desirable. The first is the presence of what is called a *baseline*. This is a time period where data from the measurement of productivity are being collected, but no feedback is being given. It serves as a basis of comparison against which to evaluate the effects of productivity enhancement to be added later, such as feedback, goal setting, and incentives. Typically, three to four months of baseline data are sufficient, as long as the baseline period is a typical period for the unit. If this is not a typical period, the baseline should be longer. For example, if the baseline falls during a major external inspection where personnel are spending large amounts of time away from their typical duties, the baseline should be extended so that a proper comparison period is available. Other situations which would make a period atypical would be when the workload was unusually heavy or light, or when the number of personnel was unusually large or small.

The second essential feature for a proper evaluation is the use of *comparison groups*. Comparison groups are units which are similar to the units receiving enhancements, but which receive no enhancements themselves. The evaluation should include collecting data on the productivity of these units during the same time periods as the baseline and enhancement implementation periods. It is not necessary or even desirable to develop a formal productivity measurement system for these comparison units. It is necessary to collect only available measures of some important aspects of their work that are also collected for the target units where the enhancements are in place.

The purpose of these comparison units is to be able to show that any changes in the productivity of the target units were due to the enhancements and not some broader organizational change. Someone could look at data that showed that the units in the program increased in productivity and remain unconvinced that it was due to the enhancements. He/she could argue that what accounted for the increase was that all units in that part of the organization were improving because of overall management practices, and so the change was not due to the enhancements. The comparison group data provide evidence on this issue. If the comparison units did not increase, or did not increase as much as the target units, this is evidence that the increase in the target units was due to the productivity enhancements.

In order to select the comparison units, the manager should select as many units as possible from the same part of the organization, and for which some productivity data could be readily collected. If the system is being tried with several sections, other sections in the branch could be used, or sections in a branch doing related work.

The third highly desirable feature is to keep track of available manpower for the units where the system is used and in the comparison units from baseline to the end of the evaluation period. Having manpower data helps evaluate the effects of the system. One could argue that unit productivity increased because manpower increased. Having the manpower data available would enable this question to be answered. If productivity went up over the evaluation period and manpower did not appreciably change, this would deal with the point. It could also be that productivity went up, and manpower went down. This would be very useful information to have available since it makes the effects of the system even more powerful. If both manpower and productivity went up, it would be useful to compare the increase in productivity with changes in productivity for comparison groups whose manpower also changed, if such comparison groups are available.

In addition to these highly desirable features it is worthwhile to supplement the evaluation with data on attitudes concerning the system. Asking incumbents and supervisors to indicate how well they like the system aids in system evaluation. It can identify areas where the system could be improved. It also makes a more convincing argument that users saw the system as valuable than just a subjective impression given by someone familiar with the operation.

An example of an evaluation of such a system can be found in Pritchard, Jones, Roth, Stuebing, and Ekeberg (1987b), which describes the development and evaluation of a feedback, goal setting, and incentive system designed and implemented in an operational Air Force environment. It also includes copies of a list of attitude questions that could be adapted for other system evaluations.

V. EXAMPLES OF FEEDBACK, GOAL SETTING, AND INCENTIVE SYSTEMS

In this section are brief examples of applications of feedback, goal setting, and incentive systems. These should give the reader a sense of how the systems have been used and provide enough information to decide whether reading the complete description of a given project would be valuable. See the References section of this manual for complete citations to each of the following examples.

Feedback Systems

Many examples of feedback systems are reported in the research literature. Section VII of this manual gives a number of examples of these systems. The three feedback systems presented below have been or could be used in military organizations.

Example 1: Individual-level feedback, using a single measure. Dockstader, Nebeker, and Shumate (1977) reported use of an individual feedback system for civilian keypunch operators in a management information center of a Naval shipyard. These operators were given feedback on their keystroke rate (number of key strokes per hour for the 8-hour shift). The daily average key stroke rate was provided privately to each operator at the end of each week. The operators were given this feedback plus the average key stroke rate of all other operators. Thus, they had a standard against which to compare their own performance. This feedback-plus-standard approach led to a large increase in the key stroke rates of the operators. Including the average performance of other operators in the feedback system encouraged individual operators to set performance goals for themselves which contributed to the increases in productivity.

Example 2: Individual-level feedback, using multiple measures. Pritchard, Bigby, Beiting, Coverdale, and Morgan (1981) used individual-level feedback with civilian clerical workers and keypunch operators. The clerical workers were individually given feedback on four indicators of their performance. Three of these indicators were quality measures (error rates), and the other was a quantity measure of units of work done per time period. The keypunch operators were given feedback on their key stroke rate relative to a standard for each type of keypunch task. These measures were combined into an index of overall keying effectiveness. In addition, the operators were given the percent of time they spent in keying and other work activities relative to the total time available for work. In addition to this feedback, the clerical workers and keypunch operators received feedback on their average performance for the previous week.

Both groups received this feedback individually and on a daily basis. The results showed a decrease in error rates and an increase in quantity of work for the clerical workers of 4% and 5% respectively. The keypunch operators obtained an 8.5% increase in their key stroke effectiveness.

Example 3: Group-level feedback, using integrated measures. Pritchard, Jones, Roth, Stuebing, and Ekeberg (1987b) reported on a group feedback system with a supply branch (containing four sections) and an electronics repair section at an operational Air Force base. The feedback system was based on a sophisticated productivity measurement system (for a detailed description, see Pritchard, Jones, Roth, Stuebing, and Ekeberg (1987a)). The productivity measurement system encompassed all the major duties of each organization. Each major duty had one or more objective measures termed "indicators." The measurement system combined measurement of productivity indicators with policy to integrate the various measures into an overall index of productivity termed "overall effectiveness." By this method, the system was able to combine 13 indicators of productivity for the electronics repair section and 33 productivity indicators for the supply branch.

The inclusion of policy in the system allowed it to take into consideration the relative importance of different duties and the specification of how good or bad different levels of performance were with respect to the overall mission of the organization. The policy specifications clearly stated how well different levels of performance met expectations. Upper-level management reviewed and had inputs into the productivity measurement system, both in terms of the indicators included in the system and the policy specifications. When differences of opinion about the productivity measurement system existed between managers and supervisors, these differences were discussed, and a consensus was reached.

Both indicator effectiveness and overall effectiveness scores were given as feedback to all members of the organizations whose productivity was being measured, as well as to upper-level management. The format of the feedback was a computer-generated report that included the indicator data for the month, the corresponding effectiveness scores, and the total effectiveness scores of the organization for the month. In addition, these data were compared to corresponding data from the previous month. The data were displayed graphically and posted on bulletin boards in the office of each section. When they received the report and graphs, the organizations met to discuss the results and work strategies for the upcoming month.

After five months of feedback, the five sections had increased their productivity an average of 50% over the previous months when no feedback system was in place. These productivity increases occurred with no increases in manpower or, in some cases, with decreases in manpower. Comparison organizations did not increase in productivity during the same time period. Members of the target organizations became more satisfied with their jobs and improved in their morale during the feedback period.

Goal Setting Systems

Example 1: Individual goal setting. Crawford, White, and Magnusson (1983) developed a goal setting program for civilians working in Naval aircraft maintenance shops. Goals were based on an individual-level performance measurement system extracted from a management information system. Each employee's performance was measured in terms of time spent on a task relative to the standard time for that task. Each week employees received this information on their own performance, plus their own corresponding data from the previous month. Employees met individually with their supervisors at the beginning of the goal setting period to set a specific performance goal. These goals were based on the employee's past performance, level of motivation, training, and work assignment. Goals were designed to be challenging but achievable. Supervisors were trained in goal setting procedures and took primary responsibility for setting goals. In some cases, supervisors assigned goals to employees; in other cases, employees participated with supervisors in setting their goals.

This goal setting program resulted in some large improvements in performance. Employees who had their goals assigned to them by their supervisors increased their performance just as much as employees who participated in the setting of their goals.

The feedback systems described in Examples 2 and 3 under feedback systems were also used as the basis for goal setting systems. In both examples, feedback alone was given for five months; then goal setting was added. Since one of these goal setting programs provided individual feedback and the other, group feedback, the systems are both described below.

Example 2: Individual goal setting. The Pritchard, Bigby, Beiting, Coverdale, and Morgan (1981) study added goal setting to the feedback system described in Example 2 under feedback. Supervisors were carefully trained in goal setting procedures. In training, emphasis was placed on encouragement of employee participation, and the importance of setting specific, challenging goals that would be accepted by the employee. Each employee met individually with his or her supervisor every two weeks to review the employee's performance and set goals on each of the indicators. Goals could either be retained, decreased, or increased as a result of these meetings. As new employees came into the organization, goals were established for them based on their level of experience. Thus, goals were individually tailored to experienced employees based on their past performance and to new employees based on their predicted performance given their level of past experience.

This combination of goal setting and feedback decreased the error rate of clerical work by an average of 15% and increased their quantity of work by 3.5%. Compared to feedback, goal setting did not appreciably change quantity of work (4% increase under feedback, 3.5% increase under goal setting) and decreased error rate 11% more than feedback alone.

Example 3: Group-level goal setting. Pritchard, Jones, Roth, Stuebing, and Ekeberg (1987b) added goal setting to the feedback system described in Example 3 under feedback. Supervisors and managers were trained in the principles of goal setting as described in Example 2 with one difference: goals were set for the entire section rather than for each employee. Goals were set in a meeting in which section supervisors discussed previous performance of their section with section members. After productivity trends were discussed, and events that could impact productivity were anticipated, a goal was set by section members and the section supervisor. Only one goal was set. It was for the overall effectiveness of the section. Goals were reviewed and reset monthly. These goals were not reviewed by upper-level management, but were known only to the section members, the section supervisor, and his or her immediate supervisor (i.e., the branch manager).

Results indicated that this goal setting system had a very large effect on productivity. Across the five sections involved in the study (four sections in supply and one in maintenance), there was a 75% increase in productivity. Thus, goal setting added a 25% increase in productivity over and above the 50% gain achieved during feedback.

Incentive Systems

Example 1: Individual monetary incentives. Dockstader, Nebeker, and Shumate (1978) used an incentive system with the same jobs and management information system described in Example 1 under feedback systems. Financial rewards were used in this system and were calculated according to the amount saved (to the Government) by the high individual performance. The rationale was that when a worker's performance exceeded the standard, the worker was to some degree doing the work of another person who would require a salary. Therefore, workers who exceeded the standards could get some fraction of that amount saved, and 11% was the fraction selected.

The actual bonus was calculated via a complex formula that included the time the operator was assigned to the machine by the supervisor, the hourly cost of the work, and an index of that operator's production efficiency.

In order to operate the incentive system, an Incentive Management Coordinator (IMC) was chosen and trained. This person was responsible for the maintenance and continued development of the incentive system. The IMC had to be thoroughly familiar with the management information system, the keypunch operator's job, the standards used to calculate the efficiency ratio, and the formula for computing bonuses. In addition, the IMC was responsible for ensuring that incentives were awarded in a timely manner, for training new supervisors and operators in using the incentive system, and for informing upper-level management of program progress.

The results of the incentive program were impressive. There was a 25% increase in performance as compared to a previous period. This increase in productivity allowed a 22% decrease in personnel (through normal attrition), resulting in considerable cost savings.

Example 2: Financial and non-financial individual incentives. Pritchard, Von Bergen, and DeLeo (1974) used financial and non-financial incentives in Air Force technical training. Three different incentive systems were used with airman trainees in Weather Observer and Aircraft Electrician Repairman courses. The non-financial incentives were letters of commendation, time-off, avoidance of work details, choice of uniform, and avoidance of marching in formation. The financial incentives were U.S. Savings Bonds and gift certificates. The incentives were developed through extensive participation of the airmen, instructors, and managers. Incentives were rated for their attractiveness by the airmen, and these incentives were then examined for feasibility by management.

Three incentive systems were used. The first awarded non-financial incentives on the basis of technical school performance, the second system awarded non-financial incentives on the basis of effort in school, and the third system added financial incentives to the second system. Performance was measured by the speed of course completion, exam scores, number of remedial instruction sessions, and number of counselling sessions. Remedial instruction sessions and counselling sessions might be required after a student failed an exam. Effort was measured by instructor ratings.

The incentive systems were established around a point system such that trainees could earn an increasing number of points for higher levels of performance or effort. These points then could be "spent" on incentives. The more attractive incentives had a higher point value; thus those who performed highest or demonstrated the highest efforts received the most attractive incentives, yet those who did less well could also earn some incentives.

These three incentive systems were found to have minimal effects. The third system had the greatest positive impact on the time to complete the Aircraft Electrical Repairman course. All three systems resulted in a reduction in the number of remedial instruction sessions and counselling sessions of the Weather Observer course. None of the systems improved exam scores. The researchers concluded that incentives that were highly feasible (such as the non-financial incentives) were not attractive enough to have a meaningful effect on performance or effort.

Example 3: Non-financial group incentive. Incentives were added to the feedback and goal setting system reported by Pritchard, Jones, Roth, Stuebing, and Ekeberg (1987b) as described in Example 3 under goal setting. This system differed from the previous two example incentive systems in two ways. First, incentives were given at group level. That is, if the incentive level was attained, everyone in the group received the incentive. Second, incentives were awarded on the overall effectiveness of the organization rather than on a few measures of job performance. This overall effectiveness measure was discussed in Example 3 for feedback systems.

Time-off from work was chosen as the most feasible and attractive incentive after discussion with airmen, supervisors, and managers. No other incentives were used.

Since the incentive system was implemented following and in addition to feedback and goal setting systems, there had already been a large increase in productivity (75%). Therefore, the incentive system was designed in a way that organization members would not feel "punished" for their previous high performance by having to work even harder to earn an incentive. In response to this requirement, a two-step incentive system was developed. A half day could be earned for maintenance of current high levels of effectiveness (defined as the average of the five months with the highest overall effectiveness scores). An additional half day could be earned for going above this high level. In the electronics repair section, the additional half day could be earned by exceeding the five-month average by 5%. In the supply branch, the additional half day could be earned for each section if the entire branch achieved its incentive level. This was done to promote necessary cooperation among the four sections of the supply branch.

The results showed that using incentives resulted in little increase in productivity over the feedback plus goal setting. Across the five sections, overall effectiveness increased only an additional 1%. It was noted, however, that awarding personnel time-off did not reduce the high level of effectiveness of these organizations. In addition, personnel had favorable attitudes toward the incentive system.

VI. IDENTIFYING POWERFUL INCENTIVES

In designing incentive systems, one area of particular concern is the decision about what incentives and forms of recognition to use. Special attention was devoted to this issue in the preparation of this manual. A number of steps were taken to identify a comprehensive list of non-financial incentives feasible for use in an Air Force environment. Then, a sample of enlisted personnel were surveyed to determine the attractiveness of these incentives. The results of this effort are presented in this section.

Management and/or the program design team can use this information in several ways. First, it is useful as a source of ideas for incentives. Second, it gives an indication of the overall attractiveness of a number of incentives to a representative sample of Air Force enlisted personnel. Third, the attractiveness data are broken down by sex, grade, command, marital status, and whether the respondent has dependent children at home. Information from these breakdowns helps to identify useful incentives for particular situations where such a program is being developed.

Development of the Incentives/Forms of Recognition List

Several steps were taken to develop a comprehensive list of non-financial incentives. A search of the research literature was made to identify incentives and forms of recognition that had been previously identified. A computer search of the social sciences and business literature was conducted. These references were used as sources for incentives and forms of recognition, and their references were used to suggest further literature. Furthermore, Department of Defense documents of the past 20 years were surveyed to find incentives and forms of recognition which had been used in a military setting.

In addition to reviewing written sources, researchers who worked in the area of incentives and organizational rewards were consulted. They were asked to suggest incentives and forms of recognition they had used or seen used in research, and any additional references they might know of in the area. These researchers were both civilian and military. Researchers from all the armed services were consulted by telephone for their input on incentives and forms of recognition and potential references.

A series of meetings were held with personnel at an Air Force base. The first group of meetings consisted of interviews with personnel at the master sergeant, senior master sergeant, and chief master sergeant levels. They were asked to talk about the incentives and forms of recognition they had used or seen used in their experience with the Air Force. They were also asked to recommend additional people for interview on the subject. A second group of meetings were held with junior and senior officers.

A third group of meetings were held with E-1's through E-3's. Since these grades are likely targets for incentives and forms of recognition programs, they were asked to think of potential incentives and forms of recognition which they would find attractive.

To take advantage of the unpublished knowledge about non-monetary incentives and forms of recognition telephone calls were made to a sample of productivity principals and first sergeants at Air Force bases in the continental United States. They were asked to identify incentives and forms of recognition they had used which were particularly effective, to suggest any written material they may have seen which would be helpful, and to provide names of others who could be contacted for further information.

Through this process, a list of approximately 600 non-financial incentives and forms of recognition was developed. These incentives and forms of recognition were edited for redundancy, feasibility, and adherence to Air Force policy. The final list of 88 incentives and forms of recognition was put in survey form and sent to a stratified random sample of 3,000 Air Force enlisted personnel. They were asked to assess the attractiveness of each incentive using a five-point rating scale where 1 = Not At All Attractive, 2 = Slightly Attractive, 3 = Moderately Attractive, 4 = Very Attractive, 5 = Extremely Attractive. Responses were returned by mail to the Air Force Human Resources Laboratory.

The number of usable responses was 1,522, which represents an overall response rate of 51%. Additional information on the number of surveys sent out to subgroups and the rate and percentage of response for each of these subgroups is presented in Appendix B, and a copy of the survey instrument is found in Appendix H.

Incentives and Attractiveness Data

A listing of incentives and forms of recognition and their overall attractiveness is presented in Table 3. Each incentive is worded in this table as it appeared in the survey. The table presents the incentives and forms of recognition listed in order of average attractiveness. It also indicates in the "Rank" column the rank of the incentive or form of recognition. A rank of 1 is the highest or most attractive and a rank of 88 is the lowest or least attractive. In addition, the number that the incentive or form of recognition was on the survey is indicated in the "Item #" column. Thus, the most attractive incentive, was number 15 on the survey, "Getting choice of assignment inside or outside of CONUS." The second most attractive incentive, number 17 on the survey, is the second incentive in Table 3, etc. Finally, the last column labeled "Average Rating" gives the average attractiveness rating across all personnel who answered the item. The higher the number, the higher the rating, with a value of 5.0 being the maximum possible rating.

The relative attractiveness of the incentives and forms of recognition is also presented in Figure 1. This figure, presented on two pages, graphically depicts the rankings of the incentives and forms of recognition according to their attractiveness. For example, the most attractive incentive is, as before, number 15, "Getting choice of assignment inside or outside of CONUS." Its average attractiveness is 4.84, which is just under the maximum possible value of 5.0. The second page of Figure 1 shows the second half of the list of incentives and forms of recognition; i.e., those lower in attractiveness.

More detail on the average attractiveness ratings is presented in Appendix A. This appendix lists the incentives in the order they appeared in the survey and gives the average attractiveness rating. The table also shows the percentage of respondents who indicated that the incentive was either "Very Attractive" or "Extremely Attractive." This is labeled "% HIGH" on the table. The percentage of respondents who indicated that the incentive was either "Not At All Attractive" or "Slightly Attractive" is also presented in the table, and is labeled "% LOW." Finally, the number of personnel who rated each incentive or form of recognition is presented in the last column, labeled "Number of Cases".

Table 3. Incentives
Ranked by Average Attractiveness

Rank	Item #	Incentive	Average Rating
1.	15.	Getting choice of assignment inside or outside of CONUS.	4.84
2.	17.	Getting to choose country of assignment.	4.67
3.	16.	Getting to choose a region of United States (e.g., East Coast, Midwest, etc.) where your next base of assignment is located.	4.67
4.	42.	Getting greater opportunity for free technical training that is acceptable for college credit.	4.50
5.	47.	Family members attending continuing education classes free or at reduced cost.	4.40
6.	18.	Being able to take temporary duty of your choice.	4.38
7.	75.	Getting a ride in an Air Force jet.	4.29
8.	9.	Getting first choice, from those available, of appropriate training opportunities in your career field.	4.29
9.	31.	Getting a three day pass during the week (Tuesday, Wednesday, and Thursday).	4.26
10.	69.	Getting free haircuts for six months.	4.25
11.	70.	Getting free telephone calls home (One 20 minute call a week for four weeks).	4.24
12.	7.	Avoiding involuntary cross-training.	4.21
13.	5.	Being able to choose which shift you work on.	4.21
14.	19.	Getting a day off for your work group. (For example, half the group gets off one day, the other half gets off the next day.)	4.20
15.	22.	Getting a day off for yourself, which is not charged to your leave account.	4.18

Table 3. Incentives
Ranked by Average Attractiveness (Cont.)

Rank	Item #	Incentive	Average Rating
16.	41.	Getting a $20 gift certificate for use at a clothing store, BX, drycleaner, etc.	4.17
17.	46.	Having a job search seminar for military personnel approaching retirement.	4.14
18.	37.	Being allowed to live off base.	4.10
19.	55.	Getting a free dinner of your choice for two at an off base restaurant.	4.08
20.	80.	Receiving a formal certificate of achievement from your supervisor and having it put in your permanent file.	4.06
21.	83.	Having a special notice for outstanding performance sent to the Commanding Officer at next base of assignment.	4.04
22.	72.	Getting a free round trip for two to a nearby big city.	4.02
23.	40.	Having your uniforms cleaned free for one month.	4.02
24.	62.	Getting two free admission tickets to a local sports event or to a movie off base.	4.00
25.	8.	Attending a workshop on career possibilities in your career field.	3.98
26.	20.	Getting a half day off for your work group.	3.95
27.	23.	Getting a half day off for yourself, which is not charged to your leave account.	3.92
28.	76.	Receiving an engraved model airplane or plaque for high performance.	3.91
29.	81.	Having the Wing Commander come to your work station to commend you for a job well done.	3.89
30.	71.	Getting use of employment referral agency for your spouse.	3.86

Table 3. Incentives Ranked by Average Attractiveness (Cont.)

Rank	Item #	Incentive	Average Rating
31.	66.	Getting two free theater tickets to a play in town, with transportation there and back and free babysitting.	3.85
32.	87.	Having your unit appear on a list of "Top Units" on base.	3.84
33.	57.	Getting an athletic bag, sports watch, set of woodworking tools, or similar item for free.	3.84
34.	49.	Taking a foreign language course for free.	3.83
35.	61.	Getting a free recreation pass for golf, bowling, etc.	3.77
36.	4.	Being able to work in the group of your choice.	3.76
37.	67.	Getting free laundry service for one week.	3.72
38.	26.	Getting four free hours of time off during a month to be taken whenever you want.	3.72
39.	64.	Getting free video recorder rental and two movies for one night.	3.71
40.	28.	Your work group being excused from weekend work for one month.	3.71
41.	50.	Having free foreign language instruction for family members.	3.69
42.	27.	Being excused from weekend work for one month.	3.69
43.	88.	Being recognized formally as one of the Wing's most outstanding personnel at a quarterly, public ceremony.	3.68
44.	77.	Getting a jacket with patches or insignia representing achievements.	3.68
45.	48.	Having a defensive driver's training course for spouses and children.	3.68

Table 3. Incentives
Ranked by Average Attractiveness (Cont.)

Rank	Item #	Incentive	Average Rating
46.	36.	Having your work group excused from extra duties such as cleaning, grass cutting, etc. for one month.	3.66
47.	45.	Having a job search seminar for your spouse.	3.65
48.	78.	Receiving a trophy for achievements at work.	3.64
49.	79.	Getting personalized pens, pencils, and coffee mugs for outstanding performance.	3.62
50.	63.	Your entire work group getting free tickets to go to a movie off base together.	3.62
51.	14.	Getting the opportunity to participate in regular problem solving meetings at work.	3.62
52.	65.	Having a pool party for your work group and their families.	3.61
53.	52.	Attending a course/workshop in stress management.	3.59
54.	32.	Getting a three day pass over the weekend.	3.59
55.	3.	Having complete choice of what tasks you work on for one day.	3.59
56.	35.	Being excused from extra duties such as cleaning, grass cutting, etc. for one month.	3.57
57.	25.	Getting an extra half hour for lunch every day for a week.	3.57
58.	21.	Your work group getting an hour off from work at the beginning or end of each day for a week.	3.56
59.	60.	Getting free arts/crafts instruction in areas such as photography, painting, etc.	3.55
60.	85.	Having your name appear on list of "Top Workers" appearing in squadron area.	3.53

Table 3. Incentives
Ranked by Average Attractiveness (Cont.)

Rank	Item #	Incentive	Average Rating
61.	24.	Getting an hour off at the beginning or end of each day for a week.	3.53
62.	43.	Attending an effective study habits program.	3.52
63.	6.	Having a meeting between the commander and your work group to discuss any thing you want to.	3.52
64.	74.	Having a letter of recognition sent home to family.	3.51
65.	84.	Being singled out for special recognition in front of other personnel.	3.49
66.	34.	Having a picnic for your work group and their families during duty time.	3.48
67.	12.	Being a representative of your work group at meetings with supervisors to voice your work group's concerns or suggestions.	3.44
68.	68.	Getting one day free babysitting.	3.42
69.	11.	Going on a field trip one weekend to see your specialty at work at another Air Force base.	3.41
70.	44.	Attending a money management workshop.	3.40
71.	33.	Having a social event during duty time for your work group.	3.40
72.	51.	Attending a course/workshop in developing parenting skills.	3.36
73.	86.	Having a bulletin board where awards and forms of recognition are posted in your work area.	3.35
74.	29.	Having a work group lunch catered at your work place.	3.30
75.	59.	Getting use of a car for one weekend.	3.29

Table 3. Incentives
Ranked by Average Attractiveness (Concluded)

Rank	Item #	Incentive	Average Rating
76.	10.	Serving as the informal instructor for newer workers.	3.28
77.	82.	Having your photograph taken with the Wing Commander.	3.24
78.	53.	Attending a personal awareness seminar.	3.22
79.	39.	Getting T-shirts with your work group insignia.	3.15
80.	58.	Being allowed to have a weekend visitor stay at the base dormitory for free.	3.10
81.	13.	Attending an Airmen/NCO breakfast which would include feedback & items of mutual interest discussed in a semi-social atmosphere.	3.09
82.	73.	Having families of high performing units given a tour of the work site.	3.08
83.	2.	Meeting a visiting dignitary as a representative of base personnel.	3.08
84.	30.	Being able to check out a car from the motor pool for use on base.	3.07
85.	56.	Having your photograph taken free.	2.98
86.	1.	Being selected to "shadow" the squadron commander or other upper level manager for a day to get a more comprehensive view of the workings of the organization.	2.85
87.	38.	Having access to the base kitchen for "cook your own" nights.	2.73
88.	54.	Attending a free personal grooming class.	2.53

FIG. 1. INCENTIVES RANKED BY AVERAGE ATTRACTIVENESS

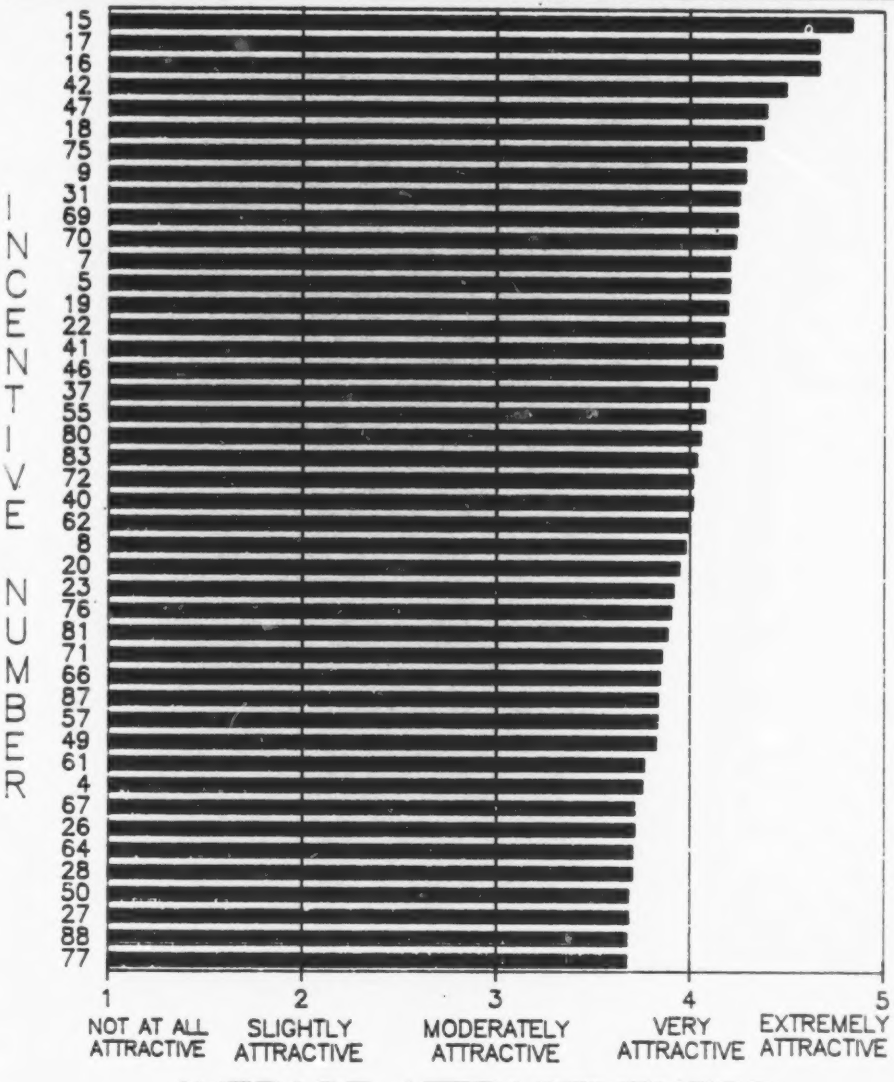
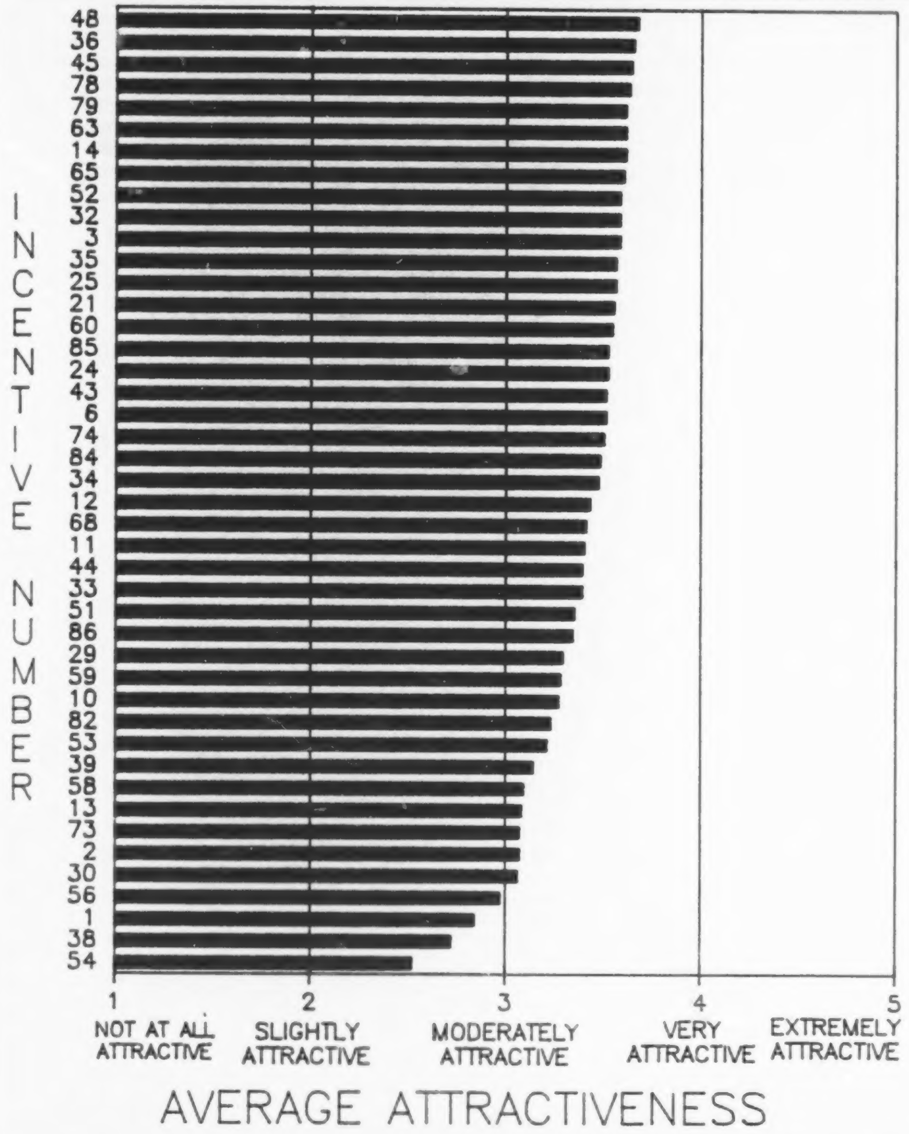


FIG. 1. INCENTIVES RANKED BY AVERAGE ATTRACTIVENESS (CONCLUDED)



The average attractiveness of all 88 incentives and forms of recognition included in the survey is 3.71. One would expect this average to be higher than the middle anchor (half way between the highest and lowest possible rating) of the rating scale (3.00), since to some extent the incentives and forms of recognition were pre-selected for attractiveness. That is, the sources we contacted to develop the original list were asked to identify attractive incentives and forms of recognition. Only four of the incentives and forms of recognition received average ratings lower than 3.0, which was defined as moderately attractive by the rating scale.

In addition to these overall results, the incentive and forms of recognition attractiveness data were also broken down by sex, grade, command, marital status, and whether respondent had dependent children at home. Sex was male or female. Grade was Amn-SrA, Sgt-SSgt, and TSgt-MSgt. Command was Tactical Air Command, Strategic Air Command, Military Airlift Command, Air Training Command, Air Force Logistics Command, Air Force Systems Command, Alaskan Air Forces, Pacific Air Forces, United States Air Forces in Europe, and Other. Marital status was single or married. Dependent children living at home was "yes" or "no."

A summary of these results is presented in Table 4. The rows in this table give an abbreviated version of the incentive or form of recognition (e.g., "Shadow the squadron commander" rather than "Being selected to "shadow" the squadron commander or other upper-level manager for a day to get a more comprehensive view of the workings of the organization.") The five breakdown variables, sex, grade, command, marital status, and presence of dependent children are presented in the columns. If an asterisk (*) appears in the intersection of an incentive or form of recognition row and the breakdown variable column, it indicates that the attractiveness of that incentive or form of recognition was different among at least two categories of that breakdown variable. The criterion for "different" is that there be at least a .5 scale point difference in average attractiveness between any two categories of breakdown variable, and the difference be greater than would be expected by chance (statistical significance of .05). For example, the first incentive has no asterisks in its intersection with the Sex and Dep columns. This means that males and females found this incentive equally attractive, as did personnel with and without dependent children at home. That is, the arithmetic difference between the average attractiveness scores for males and females is so small that it probably resulted by chance. There are, however, asterisks in the intersections with the columns labeled Grade, and Marital. This indicates that personnel in at least two categories of the three different grades varied on how attractive they found the incentive, as

Table 4.
Differential Attractiveness

Incentive	Classifications				
	SEX	GRADE	COMMAND	MARITAL	DEP
1. "Shadow" the squadron commander.		*[a]		*	
2. Meet a visiting dignitary.			*		
3. Choose tasks you work on for one day.					
4. Work in the group of your choice.					
5. Choose shift you work on.					
6. Meeting between the commander and your work group.					
7. Avoiding involuntary cross-training.					
8. Attending a workshop on career possibilities.					
9. Getting first choice of training opportunities.					
10. Serving as the informal instructor for new workers.					
11. Field trip to see your specialty at another Air Force base.		*		*	*
12. Representing work group at meetings with supervisors.					
13. Attending an Airmen/NCO breakfast.					

Table 4 (Cont.)
Differential Attractiveness

Incentive	Classifications				
	SEX	GRADE	COMMAND	MARITAL	DEP
14. Participate in problem solving meetings at work.					
15. Choice of assignment inside or outside of CONUS.					
16. Choose next base of assignment within United States.					
17. Choose country of assignment.					
18. Take temporary duty of your choice.					
19. Getting a day off for your work group.		*			
20. Getting a half day off for your work group.		*			
21. An hour off per day for work group for a week.		*			
22. A day off not charged to your leave account.		*			
23. A half day off not charged to your leave account.		*			
24. An hour off per day for a week.		*			*
25. An extra half hour for lunch every day for a week.	*	*			
26. Four time off hours to be taken whenever you want.	*	*			

Table 4 (Cont.)
Differential Attractiveness

Incentive	Classifications				
	SEX	GRADE	COMMAND	MARITAL	DEP
27. Being excused from weekend work for one month.		*			
28. No weekend work for work group for one month.		*			
29. Work group lunch catered at your work place.		*		*	*
30. Check out a car from the motor pool for use on base.		*	*	*	*
31. Three day pass during the week (Tue., Wed., and Thurs.).					
32. Getting a three day pass over the weekend.		*		*	*
33. A social event during duty time for your work group.		*			
34. Picnic for work group and families during duty time.					
35. Excused from extra duties for one month.		*	*	*	*
36. Work group excused from extra duties for one month.		*			
37. Being allowed to live off base.		*	*	*	*
38. Access to base kitchen for "cook-your-own" nights.	*	*		*	*
39. Getting T-shirts with your work group insignia.		*	*	*	

Table 4 (Cont.)
Differential Attractiveness

Incentive	Classifications				
	SEX	GRADE	COMMAND	MARITAL	DEP
40. Having your uniforms cleaned free for one month.		*			
41. Getting a $20 gift certificate.					
42. Technical training for college credit.					
43. Attending an effective study habits program.					
44. Attending a money management workshop.			*		
45. Having a job search seminar for your spouse.			*		
46. Job search seminar for personnel near retirement.			*		
47. Free continuing education classes for family.					
48. Defensive driver's training course for family.					
49. Taking a foreign language course for free.		*			
50. Having free foreign language instruction for family.			*		
51. A course/workshop in developing parenting skills.			*		
52. Attending a course/workshop in stress management.					

Table 4 (Cont.)
Differential Attractiveness

Incentive	Classifications				
	SEX	GRADE	COM-MAND	MARI-TAL	DEP
53. Attending a personal awareness seminar.			*		
54. Attending a free personal grooming class.	*	*	*	*	*
55. Free dinner for two at an off base restaurant.					
56. Having your photograph taken free.	*	*	*	*	*
57. Free item, i.e. athletic bag, sports watch, etc.		*	*		
58. Have a weekend visitor stay at base dormitory free.		*	*	*	*
59. Getting use of a car for one weekend.		*	*	*	*
60. Free arts/crafts instruction such as photography.		*	*		
61. Free recreation pass for golf, bowling, etc.		*			
62. Two free tickets to sports event or movie off base.		*			
63. Free tickets for movie off base for whole work group.		*			
64. Free VCR rental and two movies for one night.		*	*		

Table 4 (Cont.)
Differential Attractiveness

Incentive	Classifications SEX	GRADE	COM-MAND	MARI-TAL	DEP
65. Pool party for your work group and their families.		*	*		
66. Two free theater tickets, sitter, and transport.			*		
67. Getting free laundry service for one week.		*			
68. Getting one day free babysitting.		*			
69. Getting free haircuts for six months.					
70. Four free phone calls (one 20 minute call/week).		*			
71. Use of employment referral agency for your spouse.					
72. Free round trip for two to a nearby big city.		*			
73. Tour of work site for families of top workers.		*	*		
74. Letter of recognition sent home to family.		*	*	*	
75. Getting a ride in an Air Force jet.		*			
76. Engraved model airplane or plaque.		*	*		
77. Jacket with achievement patches or insignia.		*	*		

Table 4 (Concluded).
Differential Attractiveness

Incentive	Classifications SEX	GRADE	COMMAND	MARITAL	DEP
78. Trophy for achievements at work.			*		
79. Personalized pens, pencils, and coffee mugs.			*		
80. Certificate of achievement put in your file.		*			
81. Wing Commander at your work station to commend you.			*		
82. Having your photograph taken with the Wing Commander.		*	*	*	
83. Outstanding performance notice sent to next base.		*	*		
84. Special recognition in front of other personnel.			*		
85. Having your name appear on list of "Top Workers".		*			
86. Award and recognition bulletin board in work area.					
87. Your unit appears on a list of "Top Units" on base.			*		
88. Named one of the Wing's most outstanding personnel.			*		

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a. An astrisk indicates that there were meaningful differences in incentive attractiveness for that classification factor. For example, the first astrisk in the table indicates that the different grades found the first incentive different in attractiveness. Data on the actual values of the average differences between classifications are found in Appendices C-G. A meaningful difference is defined as an average difference in the attractiveness rating of .5 or larger and a difference larger than expected by chance (statistical significance at .05).

did personnel in at least two of the different commands, and as did those who were married or single.

If one wanted to institute an incentive system, this table is a useful supplement to the overall attractiveness data presented earlier. Specifically, if incentives or forms of recognition are selected for possible use based on their overall attractiveness, it would be useful to examine Table 4 to see if subgroups have different attractiveness for those incentives. If they do, the more detailed data in the appendices should be examined to see exactly what subgroups show what differences. For example, if a potential incentive or form of recognition shows up as attractive to females but not to males, and there are no females in the unit for which the system is being designed, that incentive or form of recognition should probably not be used for that unit.

Complete data on average incentive and form of recognition attractiveness for the categories of the breakdown variables are found in the appendices as follows: By Sex (Appendix C), By Grade (Appendix D), By Command (Appendix E), By Marital Status (Appendix F), and By Presence of Dependent Children (Appendix G). Specific numeric differences in the attractiveness of the breakdown variables can be seen in these data.

There were some systematic differences in ratings. For example, females rated most incentives and forms of recognition higher than did males. Single persons generally rated incentives and forms of recognition more highly than did married persons, and lower ratings were associated with higher grades. There did not appear to be systematic differences based on command or presence of dependent children.

VII. WHERE TO GET MORE INFORMATION

Below are a number of publications of use to readers wishing more information on feedback, goal setting, incentives, or productivity measurement. Each publication is briefly described. A complete reference for each is found under References in the next section of this manual.

Feedback, Goal Setting, and Incentives

Crawford et al., 1983. This technical report describes a goal setting program built around a system that measures individual performance in terms of standards. The data for the performance measures were extracted from a management information system. The system was used with civilians working in Naval aircraft maintenance shops. A training program for shop foremen and managers in how to set goals for the workers is described.

Dockstader et al., 1977. One in a series of technical reports on approaches to increasing productivity through enhancing motivation. Subjects were civilian keypunch operators working in a large Naval shipyard. The report discusses measuring productivity and using feedback in a simple job where one objective measure of productivity was available that encompassed the job responsibility of workers.

Dockstader et al., 1978. This technical report describes the addition of financial incentives to the above-mentioned feedback. It gives a detailed account of a method of calculating a bonus for performance that exceeds work standard.

Ilgen et al., 1979. A review article on performance feedback to individuals, this article presents a model of how feedback works and discusses research on feedback in terms of this model. Although much of the research described fits the type of feedback discussed in this manual, the model is designed to fit most closely to performance appraisal rating feedback.

Latham and Yukl, 1975. Based on workers in the logging industry, this study discusses the development of a goal setting system and a method of tracking its effectiveness.

Locke et al., 1981. In an exhaustive review of the research literature on goal setting, this article reports a large amount of support for the positive effects of goal setting on performance, as well as conditions which seem to enhance the impact of goal setting.

Nadler, 1979. This article reviews the literature on the effects of feedback on work or task behavior of people in groups. Factors that affect how feedback will impact group performance and issues of how best to design a group-oriented feedback system are discussed. A model of the impact of feedback on group performance is presented.

Pritchard et al., 1981. This technical report describes the use of a feedback and goal setting system for clerical workers and keypunch operators. These relatively simple jobs had multiple measures of performance. The report describes how these multiple measures were presented together in a computer-generated feedback report given to the clerks and operators on a daily basis. The report explains how the feedback system was administered and how it was used as the basis of a goal setting program. The basic principles of goal setting are presented, as well as a brief description of the training of managers in goal setting. Also included is a description of how new workers were introduced to the feedback and goal setting systems and how goals were set for their performance.

Pritchard et al., 1987b. This report describes the use of feedback, goal setting, and incentive systems based on a new method of measuring productivity (described in Pritchard et al., 1987a). These systems were used with complex jobs that require cooperation among individuals and groups to accomplish the mission of the organizations, four sections of a supply branch and an electronics repair section at an operational Air Force base. The report describes a comprehensive feedback system that contains multiple measures of productivity and integrates them into an overall index of effectiveness for each of the organizations. The report also explains how goals and incentive levels were set on these overall indices of effectiveness.

Taylor et al., 1984. This review article takes a cybernetic or control theory approach and envisions feedback as providing an information loop to the system about the nature of its products or outputs. It discusses how discrepancies occur between the message intended by the feedback and the understanding of the message by the feedback recipients. Also examined is how feedback affects the setting of performance goals and how these goals change in response to the information provided by feedback. The effects of feedback on responses, such as change in effort or alteration of work strategies, are also covered.

Productivity Measurement

American Productivity Center, 1986. This report presents the results of a large research project in major U.S. corporations on white collar productivity. Productivity measures are described for service-oriented jobs that are typically difficult to measure.

Muckler, 1982. This comprehensive article summarizes and overviews issues in productivity measurement. Issues include different kinds of productivity, various measurement problems, the uses of productivity measurement information, and various types of productivity measurement systems.

Pritchard et al., 1987a. This report describes the development and evaluation of a new method of measuring productivity. The method is designed for complex jobs where there are multiple measures of productivity. This productivity measurement system is also designed to increase productivity by maximizing work force motivation. The system can integrate the productivity of sub-units into an overall effectiveness index of a larger organization, and it can compare the productivity of different units even if they are quite different from one another.

Tuttle, 1981; Tuttle et al., 1985. These reports present several definitions of productivity and what it means in the Air Force. A distinction is made between productivity as effectiveness or efficiency, and suggestions are offered for combining these two definitions. Productivity measurement methods are described and critiqued. The reports describe extensive field tests of a method for developing a productivity measurement system that has been successfully used in many Air Force organizations, the Methodology for Generating Efficiency and Effectiveness Measures (MGEEM).

Tuttle and Weaver, 1986a & 1986b. These two reports are practical manuals written for use by Air Force personnel to develop the productivity measurement system, the Methodology for Generating Efficiency and Effectiveness Measures (MGEEM), described in earlier Tuttle reports. The first report provides an overview of the MGEEM process and identifies anticipated benefits, costs, and risks for the Air Force commander, manager, or supervisor contemplating its use. The second report provides sufficient technical detail to guide a measurement facilitator through an operational implementation of the MGEEM in an organization.

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APPENDIX A:
AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings			Number of Cases
	AVERAGE	% HIGH[a]	% LOW[a]	
1. Being selected to "shadow" the squadron commander or other upper level manager for a day to get a more comprehensive view of the workings of the organization.	2.85	26.4%	34.0%	1383
2. Meeting a visiting dignitary as a representative of base personnel.	3.08	34.1%	28.6%	1426
3. Having complete choice of what tasks you work on for one day.	3.59	52.3%	17.3%	1459
4. Being able to work in the group of your choice.	3.76	60.5%	12.8%	1484
5. Being able to choose which shift you work on.	4.21	79.3%	6.0%	1508
6. Having a meeting between the commander and your work group to discuss any thing you want to.	3.52	50.0%	16.7%	1477
7. Avoiding involuntary cross-training.	4.21	75.6%	8.2%	1477
8. Attending a workshop on career possibilities in your career field.	3.98	69.5%	10.5%	1503
9. Getting first choice, from those available, of appropriate training opportunities in your career field.	4.29	81.1%	3.9%	1510
10. Serving as the informal instructor for newer workers.	3.28	40.0%	20.6%	1463
11. Going on a field trip one weekend to see your specialty at work at another Air Force base.	3.41	48.3%	25.9%	1423

APPENDIX A (CONT.):
AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings			Number of Cases
	AVERAGE	% HIGH	% LOW	
12. Being a representative of your work group at meetings with supervisors to voice your work group's concerns or suggestions.	3.44	46.5%	18.3%	1472
13. Attending an Airmen/NCO breakfast which would include feedback & items of mutual interest discussed in a semi-social atmosphere.	3.09	33.5%	27.2%	1425
14. Getting the opportunity to participate in regular problem solving meetings at work.	3.62	54.9%	12.7%	1485
15. Getting choice of assignment inside or outside of CONUS.	4.84	96.3%	1.0%	1519
16. Getting to choose a region of United States (e.g., East Coast, Midwest, etc.) where your next base of assignment is located.	4.67	93.2%	1.5%	1517
17. Getting to choose country of assignment.	4.67	92.8%	1.6%	1515
18. Being able to take temporary duty of your choice.	4.38	83.2%	3.7%	1516
19. Getting a day off for your work group. (For example, half the group gets off one day, the other half gets off the next day.)	4.20	76.7%	6.8%	1507
20. Getting a half day off for your work group.	3.95	67.2%	10.5%	1498
21. Your work group getting an hour off from work at the beginning or end of each day for a week.	3.56	51.2%	20.3%	1473

APPENDIX A (CONT.): AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings AVERAGE	 % HIGH	 % LOW	Number of Cases
22. Getting a day off for yourself, which is not charged to your leave account.	4.18	74.4%	8.4%	1503
23. Getting a half day off for yourself, which is not charged to your leave account.	3.92	64.3%	12.4%	1490
24. Getting an hour off at the beginning or end of each day for a week.	3.53	49.6%	21.9%	1466
25. Getting an extra half hour for lunch every day for a week.	3.57	50.4%	21.6%	1458
26. Getting four free hours of time off during a month to be taken whenever you want.	3.72	55.8%	17.1%	1475
27. Being excused from weekend work for one month.	3.69	55.0%	18.2%	1456
28. Your work group being excused from weekend work for one month.	3.71	55.7%	17.6%	1457
29. Having a work group lunch catered at your work place.	3.30	41.8%	25.7%	1413
30. Being able to check out a car from the motor pool for use on base.	3.07	33.8%	33.0%	1357
31. Getting a three day pass during the week (Tuesday, Wednesday, and Thursday).	4.26	78.8%	6.6%	1508
32. Getting a three day pass over the weekend.	3.59	53.2%	21.1%	1443
33. Having a social event during duty time for your work group.	3.40	44.8%	21.7%	1458

APPENDIX A (CONT.):
AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings			Number of Cases
	AVERAGE	% HIGH	% LOW	
34. Having a picnic for your work group and their families during duty time.	3.48	46.7%	20.3%	1446
35. Being excused from extra duties such as cleaning, grass cutting, etc. for one month.	3.57	50.5%	21.3%	1463
36. Having your work group excused from extra duties such as cleaning, grass cutting, etc. for one month.	3.66	54.2%	18.9%	1459
37. Being allowed to live off base.	4.10	71.4%	11.7%	1489
38. Having access to the base kitchen for "cook-your-own" nights.	2.73	25.1%	41.0%	1330
39. Getting T-shirts with your work group insignia.	3.15	36.6%	29.5%	1399
40. Having your uniforms cleaned free for one month.	4.02	68.1%	11.4%	1469
41. Getting a $20 gift certificate for use at a clothing store, BX, drycleaner, etc.	4.17	74.0%	7.0%	1502
42. Getting greater opportunity for free technical training that is acceptable for college credit.	4.50	88.6%	2.9%	1511
43. Attending an effective study habits program.	3.52	49.1%	17.6%	1456
44. Attending a money management workshop.	3.40	44.7%	21.5%	1444
45. Having a job search seminar for your spouse.	3.65	52.8%	15.8%	1388

APPENDIX A (CONT.): AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings AVERAGE	% HIGH	% LOW	Number of Cases
46. Having a job search seminar for military personnel approaching retirement.	4.14	74.1%	8.3%	1478
47. Family members attending continuing education classes free or at reduced cost.	4.40	83.6%	4.6%	1479
48. Having a defensive driver's training course for spouses and children.	3.68	55.2%	14.8%	1443
49. Taking a foreign language course for free.	3.83	61.8%	14.1%	1477
50. Having free foreign language instruction for family members.	3.69	55.3%	15.6%	1454
51. Attending a course/workshop in developing parenting skills.	3.36	42.5%	22.4%	1424
52. Attending a course/workshop in stress management.	3.59	51.3%	17.0%	1452
53. Attending a personal awareness seminar.	3.22	36.9%	25.6%	1413
54. Attending a free personal grooming class.	2.53	16.4%	43.0%	1264
55. Getting a free dinner of your choice for two at an off base restaurant.	4.08	71.6%	10.1%	1486
56. Having your photograph taken free.	2.98	30.3%	34.2%	1372
57. Getting an athletic bag, sports watch, set of woodworking tools, or similar item for free.	3.84	59.7%	14.0%	1456

APPENDIX A (CONT.):
AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings			Number of Cases
	AVERAGE	% HIGH	% LOW	
58. Being allowed to have a weekend visitor stay at the base dormitory for free.	3.10	38.0%	32.3%	1379
59. Getting use of a car for one weekend.	3.29	41.6%	27.0%	1406
60. Getting free arts/crafts instruction in areas such as photography, painting, etc.	3.55	49.1%	18.4%	1461
61. Getting a free recreation pass for golf, bowling, etc.	3.77	58.3%	13.6%	1477
62. Getting two free admission tickets to a local sports event or to a movie off base.	4.00	68.4%	8.8%	1487
63. Your entire work group getting free tickets to go to a movie off base together.	3.62	52.9%	17.9%	1448
64. Getting free video recorder rental and two movies for one night.	3.71	56.5%	16.3%	1474
65. Having a pool party for your work group and their families.	3.61	52.5%	18.0%	1464
66. Getting two free theater tickets to a play in town, with transportation there and back and free babysitting.	3.85	61.5%	13.1%	1455
67. Getting free laundry service for one week.	3.72	56.1%	17.2%	1454
68. Getting one day free babysitting.	3.42	41.6%	22.8%	1307
69. Getting free haircuts for six months.	4.25	76.3%	7.9%	1463

APPENDIX A (CONT.): AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings			Number of Cases
	AVERAGE	% HIGH	% LOW	
70. Getting free telephone calls home (One 20 minute call a week for four weeks).	4.24	75.8%	8.3%	1480
71. Getting use of employment referral agency for your spouse.	3.86	59.7%	11.1%	1406
72. Getting a free round trip for two to a nearby big city.	4.02	67.9%	11.1%	1471
73. Having families of high performing units given a tour of the work site.	3.08	32.7%	30.3%	1377
74. Having a letter of recognition sent home to family.	3.51	49.1%	21.0%	1432
75. Getting a ride in an Air Force jet.	4.29	63.5%	8.7%	1484
76. Receiving an engraved model airplane or plaque for high performance.	3.91	64.2%	11.5%	1470
77. Getting a jacket with patches or insignia representing achievements.	3.68	54.2%	16.7%	1439
78. Receiving a trophy for achievements at work.	3.64	53.2%	17.0%	1461
79. Getting personalized pens, pencils, and coffee mugs for outstanding performance.	3.62	51.8%	17.4%	1451
80. Receiving a formal certificate of achievement from your supervisor and having it put in your permanent file.	4.06	72.0%	8.0%	1492

APPENDIX A (CONCLUDED): AVERAGE INCENTIVE ATTRACTIVENESS

Incentive	Attractiveness Ratings AVERAGE	 % HIGH	 % LOW	Number of Cases
81. Having the Wing Commander come to your work station to commend you for a job well done.	3.89	64.9%	13.8%	1463
82. Having your photograph taken with the Wing Commander.	3.24	39.7%	26.4%	1396
83. Having a special notice for outstanding performance sent to the Commanding Officer at next base of assignment.	4.04	71.5%	9.5%	1482
84. Being singled out for special recognition in front of other personnel.	3.49	47.7%	20.2%	1438
85. Having your name appear on list of "Top Workers" appearing in squadron area.	3.53	50.3%	19.8%	1454
86. Having a bulletin board where awards and forms of recognition are posted in your work area.	3.35	42.5%	23.4%	1446
87. Having your unit appear on a list of "Top Units" on base.	3.84	62.1%	12.4%	1476
88. Being recognized formally as one of the Wing's most outstanding personnel at a quarterly, public ceremony.	3.68	53.9%	16.4%	1423

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a. The column labled % HIGH is the sum of the percentage of respondents who indicated "Very Attractive" or "Extremely Attractive". The % LOW is the sum of the percentage who indicated "Not At All Attractive" or "Slightly Attractive".

APPENDIX B: PERCENTAGES OF PEOPLE RETURNING SURVEY

Category*	Number Sent out	Number Returned	Percent Returned
Sex			
Male	2,640	1,286	48.71
Female	360	198	55.00
Marital Status			
Married	1,886	1,043	55.30
Single	995	455	45.73
Command			
TAC	550	301	54.73
SAC	570	292	51.22
MAC	424	215	50.71
ATC	262	140	53.44
AFLC	57	31	54.39
AFSC	110	64	58.18
AlaskanAF	41	25	60.98
PACAF	136	75	55.15
USAFE	358	156	43.58
Other	492	196	39.84

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*Response rates broken down by grade and by dependent children were not available. The surveys were sent out to individuals based on "E" grades whereas the survey item for grade asked that respondents designate their grade in terms of SrA., Sgt., etc. Because of this inconsistency, we were not able to determine how many surveys were returned by the different grades. Data on percentage of surveys sent by presence of dependent childern were not determined at the time the sample was selected, so no return rate data can be calculated. The total number returned for each category (e.g. sex) does not equal the total number of questionnaires returned (1,522) because some questionnaires had some missing information.

APPENDIX C: AVERAGE INCENTIVE ATTRACTIVENESS RATINGS

(BY SEX)

Incentives	Female	Male
1. "Shadow" the squadron commander.	3.13	2.81
2. Meet a visiting dignitary.	3.35	3.04
3. Choose tasks you work on for one day.	3.84	3.55
4. Work in the group of your choice.	4.00	3.73
5. Choose shift you work on.	4.40	4.18
6. Meeting between the commander and your work group.	3.63	3.50
7. Avoiding involuntary cross-training.	4.23	4.21
8. Attending a workshop on career possibilities.	4.11	3.97
9. Getting first choice of training opportunities.	4.32	4.28
10. Serving as the informal instructor for new workers.	3.45	3.26
11. Field trip to see your specialty at another Air Force base.	3.65	3.38
12. Representing work group at meetings with supervisors.	3.45	3.44
13. Attending an Airmen/NCO breakfast.	3.38	3.05
14. Participate in problem solving meetings at work.	3.61	3.62

APPENDIX C (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATINGS (BY SEX)

Incentives	Female	Male
15. Choice of assignment inside or outside of CONUS.	4.91	4.83
16. Choose next base of assignment within United States.	4.73	4.66
17. Choose country of assignment.	4.78	4.66
18. Take temporary duty of your choice.	4.78	4.66
19. Getting a day off for your work group.	4.45	4.16
20. Getting a half day off for your work group.	4.29	3.90
21. An hour off per day for work group for a week.	3.95	3.50
22. A day off not charged to your leave account.	4.44	4.14
23. A half day off not charged to your leave account.	4.33	3.86
24. An hour off per day for a week.	3.96	3.47
25. An extra half hour for lunch every day for a week.	4.04	3.50
26. Four time off hours to be taken whenever you want.	4.16	3.66
27. Being excused from weekend work for one month.	4.00	3.64

APPENDIX C (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATINGS (BY SEX)

Incentives	Female	Male
28. No weekend work for work group for one month.	3.97	3.68
29. Work group lunch catered at your work place.	3.65	3.24
30. Check out a car from the motor pool for use on base.	3.08	3.06
31. Three day pass during the week (Tue., Wed., and Thurs.).	4.55	4.22
32. Getting a three day pass over the weekend.	3.81	3.56
33. A social event during duty time for your work group.	3.74	3.36
34. Picnic for work group and families during duty time.	3.65	3.46
35. Excused from extra duties for one month.	3.82	3.53
36. Work group excused from extra duties for one month.	3.86	3.64
37. Being allowed to live off base.	4.41	4.06
38. Access to base kitchen for "cook-your-own" nights.	3.22	2.67
39. Getting T-shirts with your work group insignia.	3.17	3.15
40. Having your uniforms cleaned free for one month.	4.28	3.99
41. Getting a $20 gift certificate.	4.32	4.15

APPENDIX C (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATINGS (BY SEX)

Incentives	Female	Male
42. Technical training for college credit.	4.51	4.51
43. Attending an effective study habits program.	3.58	3.51
44. Attending a money management workshop.	3.57	3.38
45. Having a job search seminar for your spouse.	3.41	3.67
46. Job search seminar for personnel near retirement.	4.06	4.15
47. Free continuing education classes for family.	4.23	4.43
48. Defensive driver's training course for family.	3.57	3.69
49. Taking a foreign language course for free.	4.04	3.79
50. Having free foreign language instruction for family.	3.69	3.69
51. A course/workshop in developing parenting skills.	3.63	3.32
52. Attending a course/workshop in stress management.	3.83	3.55
53. Attending a personal awareness seminar.	3.61	3.15
54. Attending a free personal grooming class.	3.04	2.45

APPENDIX C (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATINGS (BY SEX)

Incentives	Female	Male
55. Free dinner for two at an off base restaurant.	4.22	4.06
56. Having your photograph taken free.	3.45	2.92
57. Free item, i.e. athletic bag, sports watch, etc.	3.86	3.84
58. Have a weekend visitor stay at base dormitory free.	3.33	3.07
59. Getting use of a car for one weekend.	3.45	3.28
60. Free arts/crafts instruction such as photography.	3.83	3.51
61. Free recreation pass for golf, bowling, etc.	3.73	3.77
62. Two free tickets to sports event or movie off base.	4.00	4.00
63. Free tickets for movie off base for whole work group.	3.72	3.61
64. Free VCR rental and two movies for one night.	3.87	3.69
65. Pool party for your work group and their families.	3.80	3.60
66. Two free theater tickets, sitter, and transport.	3.99	3.83
67. Getting free laundry service for one week.	3.93	3.69

APPENDIX C (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATINGS
(BY SEX)

Incentives	Female	Male
68. Getting one day free babysitting.	3.84	3.36
69. Getting free haircuts for six months.	3.92	4.29
70. Four free phone calls (one 20 minute call/week).	4.37	4.22
71. Use of employment referral agency for your spouse.	3.68	3.88
72. Free round trip for two to a nearby big city.	4.26	3.99
73. Tour of work site for families of top workers.	3.16	3.06
74. Letter of recognition sent home to family.	3.70	3.49
75. Getting a ride in an Air Force jet.	4.27	4.30
76. Engraved model airplane or plaque.	3.98	3.91
77. Jacket with achievement patches or insignia.	3.72	3.68
78. Trophy for achievements at work.	3.67	3.64
79. Personalized pens, pencils, and coffee mugs.	3.67	3.61
80. Certificate of achievement put in your file.	4.18	4.05
81. Wing Commander at your work station to commend you.	4.02	3.87

APPENDIX C (Concluded): AVERAGE INCENTIVE ATTRACTIVENESS RATINGS (BY SEX)

Incentives	Female	Male
82. Having your photograph taken with the Wing Commander.	3.49	3.21
83. Outstanding performance notice sent to next base.	4.24	4.01
84. Special recognition in front of other personnel.	3.63	3.47
85. Having your name appear on list of "Top Workers".	3.72	3.50
86. Award and recognition bulletin board in work area.	3.63	3.31
87. Your unit appears on a list of "Top Units" on base.	3.93	3.82
88. Named one of the Wing's most outstanding personnel.	3.85	3.66

APPENDIX D: AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY GRADE)

Incentives	Amn-Sra	Sgt-SSgt	TSgt-MSgt
1. "Shadow" the squadron commander.	3.13	2.83	2.53
2. Meet a visiting dignitary.	3.25	3.10	2.84
3. Choose tasks you work on for one day.	3.80	3.53	3.41
4. Work in the group of your choice.	3.92	3.75	3.58
5. Choose shift you work on.	4.33	4.26	3.97
6. Meeting between the commander and your work group.	3.58	3.54	3.42
7. Avoiding involuntary cross-training.	4.17	4.26	4.19
8. Attending a workshop on career possibilities.	4.00	4.00	3.94
9. Getting first choice of training opportunities.	4.26	4.31	4.28
10. Serving as the informal instructor for new workers.	3.44	3.31	3.04
11. Field trip to see your specialty at another Air Force base.	3.89	3.34	2.97
12. Representing work group at meetings with supervisors.	3.39	3.49	3.41
13. Attending an Airmen/NCO breakfast.	3.20	2.12	2.93
14. Participate in problem solving meetings at work.	3.60	3.67	3.55

APPENDIX D (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY GRADE)

Incentives	Amn-Sra	Sgt-SSgt	TSgt-MSgt
15. Choice of assignment inside or outside of CONUS.	4.85	4.85	4.81
16. Choose next base of assignment within United States.	4.77	4.69	4.53
17. Choose country of assignment.	4.74	4.70	4.57
18. Take temporary duty of your choice.	4.52	4.46	4.11
19. Getting a day off for your work group.	4.38	4.27	3.88
20. Getting a half day off for your work group.	4.15	4.03	3.58
21. An hour off per day for work group for a week.	3.92	3.64	3.03
22. A day off not charged to your leave account.	4.47	4.26	3.69
23. A half day off not charged to your leave account.	4.24	3.99	3.40
24. An hour off per day for a week.	3.88	3.63	2.96
25. An extra half hour for lunch every day for a week.	3.89	3.71	2.98
26. Four time off hours to be taken whenever you want.	4.02	3.81	3.23
27. Being excused from weekend work for one month.	3.94	3.75	3.21

APPENDIX D (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY GRADE)

Incentives	Amn-Sra	Sgt-SSgt	TSgt-MSgt
28. No weekend work for work group for one month.	4.00	3.74	3.31
29. Work group lunch catered at your work place.	3.73	3.29	2.81
30. Check out a car from the motor pool for use on base.	3.43	3.06	2.68
31. Three day pass during the week (Tue., Wed., and Thurs.).	4.44	4.31	3.96
32. Getting a three day pass over the weekend.	4.01	3.53	3.23
33. A social event during duty time for your work group.	3.61	3.43	3.11
34. Picnic for work group and families during duty time.	3.65	3.50	3.27
35. Excused from extra duties for one month.	3.98	3.61	3.01
36. Work group excused from extra duties for one month.	3.98	3.66	3.31
37. Being allowed to live off base.	4.33	4.12	3.80
38. Access to base kitchen for "cook-your-own" nights.	3.25	2.77	2.14
39. Getting T-shirts with your work group insignia.	3.42	3.21	2.74
40. Having your uniforms cleaned free for one month.	4.23	4.05	3.71

APPENDIX D (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY GRADE)

Incentives	Amn-Sra	Sgt-SSgt	TSgt-MSgt
41. Getting a $20 gift certificate.	4.28	4.23	3.95
42. Technical training for college credit.	4.60	4.53	4.34
43. Attending an effective study habits program.	3.57	3.59	3.35
44. Attending a money management workshop.	3.53	3.42	3.21
45. Having a job search seminar for your spouse.	3.66	3.75	3.46
46. Job search seminar for personnel near retirement.	4.03	4.13	4.27
47. Free continuing education classes for family.	4.34	4.42	4.46
48. Defensive driver's training course for family.	3.68	3.72	3.60
49. Taking a foreign language course for free.	4.11	3.83	3.48
50. Having free foreign language instruction for family.	3.86	3.72	3.47
51. A course/workshop in developing parenting skills.	3.51	3.45	3.03
52. Attending a course/workshop in stress management.	3.64	3.63	3.45
53. Attending a personal awareness seminar.	3.32	3.23	3.05

APPENDIX D (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY GRADE)

Incentives	Amn-Sra	Sgt-SSgt	TSgt-MSgt
54. Attending a free personal grooming class.	2.88	2.53	2.18
55. Free dinner for two at an off base restaurant.	4.27	4.12	3.79
56. Having your photograph taken free.	3.49	3.00	2.43
57. Free item, i.e. athletic bag, sports watch, etc.	4.07	3.88	3.51
58. Have a weekend visitor stay at base dormitory free.	3.72	3.09	2.42
59. Getting use of a car for one weekend.	3.70	3.28	2.86
60. Free arts/crafts instruction such as photography.	3.83	3.56	3.20
61. Free recreation pass for golf, bowling, etc.	3.98	3.81	3.43
62. Two free tickets to sports event or movie off base.	4.18	4.05	3.69
63. Free tickets for movie off base for whole work group.	3.81	3.66	3.32
64. Free VCR rental and two movies for one night.	4.03	3.77	3.23
65. Pool party for your work group and their families.	3.82	3.67	3.27
66. Two free theater tickets, sitter, and transport.	4.00	3.92	3.56

APPENDIX D (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING
(BY GRADE)

Incentives	Amn-Sra	Sgt-SSgt	TSgt-MSgt
67. Getting free laundry service for one week.	3.94	3.74	3.42
68. Getting one day free babysitting.	3.70	3.57	2.92
69. Getting free haircuts for six months.	4.43	4.28	3.98
70. Four free phone calls (one 20 minute call/week).	4.53	4.29	3.87
71. Use of employment referral agency for your spouse.	3.98	3.90	3.68
72. Free round trip for two to a nearby big city.	4.33	4.06	3.63
73. Tour of work site for families of top workers.	3.29	3.12	2.76
74. Letter of recognition sent home to family.	3.86	3.50	3.11
75. Getting a ride in an Air Force jet.	4.62	4.31	3.87
76. Engraved model airplane or plaque.	4.16	3.90	3.64
77. Jacket with achievement patches or insignia.	3.93	3.69	3.40
78. Trophy for achievements at work.	3.84	3.66	3.38
79. Personalized pens, pencils, and coffee mugs.	3.75	3.64	3.42

APPENDIX D (Concluded): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY GRADE)

Incentives	Amn-Sra	Sgt-SSgt	TSgt-MSgt
80. Certificate of achievement put in your file.	4.33	4.09	3.69
81. Wing Commander at your work station to commend you.	4.04	3.94	3.64
82. Having your photograph taken with the Wing Commander.	3.61	3.22	2.89
83. Outstanding performance notice sent to next base.	4.24	4.07	3.72
84. Special recognition in front of other personnel.	3.55	3.56	3.26
85. Having your name appear on list of "Top Workers".	3.75	3.59	3.16
86. Award and recognition bulletin board in work area.	3.48	3.41	3.09
87. Your unit appears on a list of "Top Units" on base.	3.96	3.88	3.59
88. Named one of the Wing's most outstanding personnel.	3.81	3.71	3.46

APPENDIX E: AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	TAC	SAC	MAC	ATC	AFLC[a]
1. "Shadow" the squadron commander.	2.86	2.91	2.84	3.08	2.92
2. Meet a visiting dignitary.	3.15	3.21	2.98	3.02	3.42
3. Choose tasks you work on for one day.	3.60	3.64	3.58	3.47	3.61
4. Work in the group of your choice.	3.70	3.78	3.77	3.64	3.97
5. Choose shift you work on.	4.24	4.20	4.26	4.19	4.17
6. Meeting between the commander and your work group.	3.53	3.59	3.46	3.55	3.52
7. Avoiding involuntary cross-training.	4.21	4.26	4.28	4.24	4.23
8. Attending a workshop on career possibilities.	3.93	4.13	3.97	3.84	3.93
9. Getting first choice of training opportunities.	4.24	4.32	4.18	4.30	4.26
10. Serving as the informal instructor for new workers.	3.35	3.40	3.23	3.35	3.07
11. Field trip to see your specialty at another Air Force base.	3.33	3.60	3.28	3.40	3.62
12. Representing work group at meetings with supervisors.	3.42	3.52	3.40	3.42	3.48
13. Attending an Airmen/NCO breakfast.	3.03	3.18	3.02	3.15	3.24

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[a] Incentive attractiveness ratings are broken down into 10 command classifications. The first five are presented in this part of this appendix, the next five are presented in the last half of this appendix.

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	TAC	SAC	MAC	ATC	AFLC
14. Participate in problem solving meetings at work.	3.53	3.82	3.58	3.54	3.65
15. Choice of assignment inside or outside of CONUS.	4.84	4.82	4.81	4.84	4.90
16. Choose next base of assignment within United States.	4.70	4.67	4.66	4.67	4.87
17. Choose country of assignment.	4.72	4.65	4.62	4.73	4.74
18. Take temporary duty of your choice.	4.50	4.35	4.40	4.31	4.33
19. Getting a day off for your work group.	4.29	4.20	4.18	4.26	4.23
20. Getting a half day off for your work group.	3.97	3.98	3.94	4.10	3.83
21. An hour off per day for work group for a week.	3.63	3.52	3.59	3.68	3.74
22. A day off not charged to your leave account.	4.30	4.24	4.14	4.26	4.00
23. A half day off not charged to your leave account.	4.00	3.89	3.89	4.08	3.84
24. An hour off per day for a week.	3.61	3.46	3.56	3.61	3.71
25. An extra half hour for lunch every day for a week.	3.66	3.58	3.55	3.64	3.47
26. Four time off hours to be taken whenever you want.	3.80	3.77	3.69	3.74	4.07

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	TAC	SAC	MAC	ATC	AFLC
27. Being excused from weekend work for one month.	3.63	3.74	3.69	3.75	3.93
28. No weekend work for work group for one month.	3.67	3.76	3.64	3.80	3.93
29. Work group lunch catered at your work place.	3.37	3.44	3.13	3.19	3.43
30. Check out a car from the motor pool for use on base.	3.15	3.27	2.99	3.01	2.77
31. Three day pass during the week (Tue., Wed., and Thurs.).	4.29	4.27	4.12	4.31	4.27
32. Getting a three day pass over the weekend.	3.63	3.52	3.78	3.59	3.21
33. A social event during duty time for your work group.	3.47	3.42	3.30	3.47	3.57
34. Picnic for work group and families during duty time.	3.52	3.58	3.34	3.44	3.47
35. Excused from extra duties for one month.	3.58	3.66	3.58	3.69	3.27
36. Work group excused from extra duties for one month.	3.64	3.74	3.68	3.74	3.68
37. Being allowed to live off base.	4.12	4.12	4.07	4.31	4.13
38. Access to base kitchen for "cook-your-own" nights.	2.77	2.83	2.64	2.60	2.72
39. Getting T-shirts with your work group insignia.	3.14	3.26	3.18	3.14	3.36

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	TAC	SAC	MAC	ATC	AFLC
40. Having your uniforms cleaned free for one month.	3.92	4.17	4.00	4.20	4.00
41. Getting a $20 gift certificate.	4.10	4.38	4.13	4.17	4.40
42. Technical training for college credit.	4.45	4.57	4.47	4.58	4.61
43. Attending an effective study habits program.	3.38	3.71	3.67	3.41	3.52
44. Attending a money management workshop.	3.33	3.62	3.51	3.28	3.21
45. Having a job search seminar for your spouse.	3.63	3.80	3.79	3.56	3.22
46. Job search seminar for personnel near retirement.	4.11	4.30	4.17	4.10	4.03
47. Free continuing education classes for family.	4.37	4.46	4.34	4.43	4.54
48. Defensive driver's training course for family.	3.64	3.78	3.67	3.71	3.64
49. Taking a foreign language course for free.	3.81	3.84	3.79	3.74	4.13
50. Having free foreign language instruction for family.	3.59	3.76	3.73	3.48	3.93
51. A course/workshop in developing parenting skills.	3.33	3.51	3.36	3.32	3.07
52. Attending a course/workshop in stress management.	3.56	3.74	3.67	3.48	3.50

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	TAC	SAC	MAC	ATC	AFLC
53. Attending a personal awareness seminar.	3.16	3.36	3.39	3.04	2.89
54. Attending a free personal grooming class.	2.51	2.73	2.60	2.40	2.03
55. Free dinner for two at an off base restaurant.	4.18	4.24	4.03	4.12	4.17
56. Having your photograph taken free.	3.07	3.15	2.98	2.93	2.57
57. Free item, i.e. athletic bag, sports watch, etc.	3.92	4.05	3.74	3.76	4.20
58. Have a weekend visitor stay at base dormitory free.	3.13	3.30	3.09	3.02	2.75
59. Getting use of a car for one weekend.	3.40	3.43	3.10	3.16	3.07
60. Free arts/crafts instruction such as photography.	3.55	3.71	3.54	3.39	2.97
61. Free recreation pass for golf, bowling, etc.	3.82	3.94	3.67	3.69	3.77
62. Two free tickets to sports event or movie off base.	4.04	4.20	3.87	3.99	4.00
63. Free tickets for movie off base for whole work group.	3.66	3.78	3.52	3.70	3.45
64. Free VCR rental and two movies for one night.	3.76	3.95	3.61	3.74	3.42
65. Pool party for your work group and their families.	3.65	3.82	3.57	3.53	3.17

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	TAC	SAC	MAC	ATC	AFLC
66. Two free theater tickets, sitter, and transport.	3.89	3.97	3.74	3.83	3.53
67. Getting free laundry service for one week.	3.59	3.89	3.70	3.78	3.27
68. Getting one day free babysitting.	3.47	3.49	3.45	3.48	2.96
69. Getting free haircuts for six months.	4.31	4.42	4.15	4.42	4.17
70. Four free phone calls (one 20 minute call/week).	4.23	4.23	4.13	4.22	4.23
71. Use of employment referral agency for your spouse.	3.84	3.95	3.88	3.86	3.78
72. Free round trip for two to a nearby big city.	4.06	4.15	3.93	3.94	3.77
73. Tour of work site for families of top workers.	3.12	3.34	2.93	3.06	2.96
74. Letter of recognition sent home to family.	3.58	3.72	3.43	3.47	3.69
75. Getting a ride in an Air Force jet.	4.38	4.48	3.99	4.22	4.31
76. Engraved model airplane Yor plaque.	4.05	4.10	3.83	3.84	3.93
77. Jacket with achievement patches or insignia.	3.79	3.83	3.60	3.67	3.89

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	TAC	SAC	MAC	ATC	AFLC
78. Trophy for achievements at work.	3.76	3.81	3.62	3.68	4.00
79. Personalized pens, pencils, and coffee mugs.	3.69	3.81	3.56	3.70	3.78
80. Certificate of achievement put in your file.	4.05	4.17	4.00	4.09	4.13
81. Wing Commander at your work station to commend you.	3.89	4.13	3.86	3.99	3.93
82. Having your photograph taken with the Wing Commander.	3.30	3.45	3.20	3.36	3.31
83. Outstanding performance notice sent to next base.	4.00	4.18	3.95	4.19	4.17
84. Special recognition in front of other personnel.	3.41	3.62	3.45	3.72	3.41
85. Having your name appear on list of "Top Workers".	3.47	3.73	3.45	3.69	3.38
86. Award and recognition bulletin board in work area.	3.37	3.52	3.25	3.43	3.17
87. Your unit appears on a list of "Top Units" on base.	3.82	3.96	3.79	3.92	3.77
88. Named one of the Wing's most outstanding personnel.	3.63	3.91	3.62	3.85	3.64

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
1. "Shadow" the squadron commander.	3.37	2.29	2.47	2.82	2.57
2. Meet a visiting dignitary.	3.27	2.84	2.89	3.10	2.83
3. Choose tasks you work on for one day.	3.60	3.56	3.67	3.56	3.50
4. Work in the group of your choice.	3.75	3.84	3.76	3.77	3.80
5. Choose shift you work on.	4.06	4.40	4.35	4.13	4.15
6. Meeting between the commander and your work group.	3.78	3.72	3.50	3.42	3.42
7. Avoiding involuntary cross-training.	4.32	4.32	4.11	4.06	4.19
8. Attending a workshop on career possibilities.	4.02	4.16	3.95	3.98	3.95
9. Getting first choice of training opportunities.	4.33	4.56	4.11	4.41	4.34
10. Serving as the informal instructor for new workers.	3.45	3.00	3.42	3.14	3.07
11. Field trip to see your specialty at another Air Force base.	3.67	3.48	3.48	3.32	3.28
12. Representing work group at meetings with supervisors.	3.53	3.71	3.35	3.51	3.32

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
13. Attending an Airmen/NCO breakfast.	3.26	3.20	2.90	3.23	2.96
14. Participate in problem solving meetings at work.	3.78	3.40	3.71	3.62	3.48
15. Choice of assignment inside or outside of CONUS.	4.97	5.00	4.81	4.88	4.80
16. Choose next base of assignment within United States.	4.61	4..84	4.64	4.70	4.57
17. Choose country of assignment.	4.58	4.72	4.68	4.69	4.66
18. Take temporary duty of your choice.	4.30	4.24	4.53	4.36	4.32
19. Getting a day off for your work group.	4.17	4.52	4.24	4.14	4.04
20. Getting a half day off for your work group.	3.98	4.08	4.03	3.89	3.76
21. An hour off per day for work group for a week.	3.62	3.52	3.71	3.43	3.35
22. A day off not charged to your leave account.	4.08	4.24	4.15	4.04	4.04
23. A half day off not charged to your leave account.	3.97	4.12	3.96	3.74	3.77
24. An hour off per day for a week.	3.55	3.60	3.59	3.36	3.41

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
25. An extra half hour for lunch every day for a week.	3.67	3.44	3.70	3.46	3.36
26. Four time off hours to be taken whenever you want.	3.66	3.92	3.81	3.50	3.61
27. Being excused from weekend work for one month.	3.88	3.83	3.72	3.66	3.44
28. No weekend work for work group for one month.	3.82	4.20	3.82	3.65	3.51
29. Work group lunch catered at your work place.	3.51	3.54	3.16	3.21	3.15
30. Check out a car from the motor pool for use on base.	3.05	3.04	3.18	2.95	2.78
31. Three day pass during the week (Tue., Wed., and Thurs.).	4.38	4.36	4.32	4.27	4.19
32. Getting a three day pass over the weekend.	3.70	3.56	3.62	3.40	3.55
33. A social event during duty time for your work group.	3.70	3.52	3.40	3.24	3.26
34. Picnic for work group and families during duty time.	3.76	3.48	3.49	3.32	3.46
35. Excused from extra duties for one month.	3.74	3.88	3.54	3.55	3.22

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
36. Work group excused from extra duties for one month.	3.89	4.12	3.67	3.56	3.44
37. Being allowed to live off base.	4.35	4.44	3.77	4.01	3.96
38. Access to base kitchen for "cook-your-own" nights.	3.29	2.78	2.64	2.67	2.53
39. Getting T-shirts with your work group insignia.	3.56	3.48	3.24	2.94	2.80
40. Having your uniforms cleaned free for one month.	4.11	3.96	3.94	3.86	3.92
41. Getting a $20 gift certificate.	4.17	4.20	4.16	4.01	4.07
42. Technical training for college credit.	4.60	4.64	4.51	4.53	4.38
43. Attending an effective study habits program.	3.74	3.38	3.55	3.56	3.26
44. Attending a money management workshop.	3.61	3.42	3.35	3.37	3.11
45. Having a job search seminar for your spouse.	3.82	3.72	3.45	3.64	3.43
46. Job search seminar for personnel near retirement.	4.34	3.76	4.00	4.17	3.96
47. Free continuing education classes for family.	4.56	4.68	4.44	4.37	4.35

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
48. Defensive driver's training course for family.	3.86	3.72	3.66	3.66	3.49
49. Taking a foreign language course for free.	3.87	3.92	3.79	3.98	3.69
50. Having free foreign language instruction for family.	3.70	4.08	3.70	3.97	3.54
51. A course/workshop in developing parenting skills.	3.66	3.64	3.43	3.40	3.00
52. Attending a course/workshop in stress management.	3.75	3.72	3.53	3.62	3.30
53. Attending a personal awareness seminar.	3.41	3.25	3.21	3.26	2.91
54. Attending a free personal grooming class.	2.68	2.64	2.79	2.46	2.14
55. Free dinner for two at an off base restaurant.	4.05	4.13	3.93	3.89	3.88
56. Having your photograph taken free.	3.19	3.04	3.04	2.88	2.61
57. Free item, i.e. athletic bag, sports watch, etc.	4.03	3.60	3.83	3.62	3.61
58. Have a weekend visitor stay at base dormitory free.	3.41	3.00	3.07	2.99	2.75
59. Getting use of a car for one weekend.	3.62	3.04	3.15	3.21	3.21

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
60. Free arts/crafts instruction such as photography.	3.83	3.80	3.74	3.45	3.37
61. Free recreation pass for golf, bowling, etc.	3.60	3.80	3.83	3.75	3.60
62. Two free tickets to sports event or movie off base.	4.03	4.24	3.82	3.85	3.87
63. Free tickets for movie off base for whole work group.	3.79	3.88	3.58	3.41	3.42
64. Free VCR rental and two movies for one night.	3.94	3.92	3.55	3.56	3.44
65. Pool party for your work group and their families.	3.94	3.76	3.44	3.52	3.38
66. Two free theater tickets, sitter, and transport.	4.21	4.25	3.80	3.82	3.60
67. Getting free laundry service for one week.	3.74	4.08	3.62	3.65	3.68
68. Getting one day free babysitting.	3.55	3.83	3.28	3.34	3.15
69. Getting free haircuts for six months.	4.19	4.48	4.01	4.10	4.00
70. Four free phone calls (one 20 minute call/week).	4.30	4.40	4.42	4.41	4.16

APPENDIX E (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
71. Use of employment referral agency for your spouse.	4.05	4.09	3.76	3.84	3.67
72. Free round trip for two to a nearby big city.	4.24	4.08	4.04	3.96	3.95
73. Tour of work site for families of top workers.	3.19	2.78	3.12	2.90	2.82
74. Letter of recognition sent home to family.	3.77	3.37	3.49	3.41	3.15
75. Getting a ride in an Air Force jet.	4.43	4.21	4.26	4.35	4.15
76. Engraved model airplane or plaque.	3.89	4.21	3.86	3.80	3.58
77. Jacket with achievement patches or insignia.	3.94	3.79	3.74	3.48	3.34
78. Trophy for achievements at work.	3.75	3.71	3.49	3.40	3.28
79. Personalized pens, pencils, and coffee mugs.	3.67	3.79	3.46	3.37	3.33
80. Certificate of achievement put in your file.	4.29	4.24	4.11	3.97	3.87
81. Wing Commander at your work station to commend you.	4.06	4.234	3.76	4.78	3.47
82. Having your photograph taken with the Wing Commander.	3.57	3.16	3.12	3.09	2.83

APPENDIX E (Concluded): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY COMMAND)

Incentives	AFSC	AAF	PAF	USAF EUR	OTHER
83. Outstanding performance notice sent to next base.	4.16	4.28	4.04	3.99	3.75
84. Special recognition in front of other personnel.	3.52	3.64	3.44	3.48	3.19
85. Having your name appear on list of "Top Workers".	3.63	3.68	3.48	3.39	3.29
86. Award and recognition bulletin board in work area.	3.49	3.20	3.23	3.27	3.12
87. Your unit appears on a list of "Top Units" on base.	4.19	3.92	3.72	3.74	3.57
88. Named one of the Wing's most outstanding personnel.	3.90	3.80	3.64	3.58	3.29

APPENDIX F: AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY MARITAL STATUS)

Incentives	Not Married	Married
1. "Shadow" the squadron commander.	3.18	2.71
2. Meet a visiting dignitary.	3.26	3.00
3. Choose tasks you work on for one day.	3.77	3.50
4. Work in the group of your choice.	3.94	3.68
5. Choose shift you work on.	4.29	4.18
6. Meeting between the commander and your work group.	3.57	3.50
7. Avoiding involuntary cross-training.	4.23	4.22
8. Attending a workshop on career possibilities.	3.98	3.99
9. Getting first choice of training opportunities.	4.26	4.30
10. Serving as the informal instructor for new workers.	3.43	3.22
11. Field trip to see your specialty at anouther Air Force base.	3.87	3.23
12. Representing work group at meetings with supervisors.	3.48	3.42
13. Attending an Airmen/NCO breakfast.	3.26	3.03
14. Participate in problem solving meetings at work.	3.59	3.63

APPENDIX F (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY MARITAL STATUS)

Incentives	Not Married	Married
15. Choice of assignment inside or outside of CONUS.	4.82	4.85
16. Choose next base of assignment within United States.	4.72	4.65
17. Choose country of assignment.	4.71	4.66
18. Take temporary duty of your choice.	4.52	4.32
19. Getting a day off for your work group.	4.31	4.15
20. Getting a half day off for your work group.	4.15	3.86
21. An hour off per day for work group for a week.	3.86	3.43
22. A day off not charged to your leave account.	4.34	4.10
23. A half day off not charged to your leave account.	4.15	3.80
24. An hour off per day for a week.	3.86	3.38
25. An extra half hour for lunch every day for a week.	3.91	3.42
26. Four time off hours to be taken whenever you want.	4.01	3.60
27. Being excused from weekend work for one month.	3.99	3.56

APPENDIX F (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY MARITAL STATUS)

Incentives	Not Married	Married
28. No weekend work for work group for one month.	4.00	3.59
29. Work group lunch catered at your work place.	3.69	3.14
30. Check out a car from the motor pool for use on base.	3.50	2.90
31. Three day pass during the week (Tue., Wed., and Thurs.).	4.38	4.20
32. Getting a three day pass over the weekend.	3.96	3.44
33. A social event during duty time for your work group.	3.62	3.31
34. Picnic for work group and families during duty time.	3.61	3.42
35. Excused from extra duties for one month.	3.99	3.39
36. Work group excused from extra duties for one month.	3.99	3.52
37. Being allowed to live off base.	4.54	3.91
38. Access to base kitchen for "cook-your-own" nights.	3.56	2.42
39. Getting T-shirts with your work group insignia.	3.50	3.01
40. Having your uniforms cleaned free for one month.	4.22	3.92

APPENDIX F (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY MARITAL STATUS)

Incentives	Not Married	Married
41. Getting a $20 gift certificate.	4.21	4.15
42. Technical training for college credit.	4.56	4.48
43. Attending an effective study habits program.	3.70	3.45
44. Attending a money management workshop.	3.70	3.45
45. Having a job search seminar for your spouse.	3.59	3.66
46. Job search seminar for personnel near retirement.	4.11	4.15
47. Free continuing education classes for family.	4.21	4.48
48. Defensive driver's training course for family.	3.74	3.65
49. Taking a foreign language course for free.	4.08	3.71
50. Having free foreign language instruction for family.	3.85	3.63
51. A course/workshop in developing parenting skills.	3.55	3.28
52. Attending a course/workshop in stress management.	3.68	3.54
53. Attending a personal awareness seminar.	3.48	3.11

APPENDIX F (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY MARITAL STATUS)

Incentives	Not Married	Married
54. Attending a free personal grooming class.	3.21	2.30
55. Free dinner for two at an off base restaurant.	4.20	4.02
56. Having your photograph taken free.	3.47	2.80
57. Free item, i.e. athletic bag, sports watch, etc.	4.03	3.76
58. Have a weekend visitor stay at base dormitory free.	3.94	2.74
59. Getting use of a car for one weekend.	3.80	3.08
60. Free arts/crafts instruction such as photography.	3.82	3.44
61. Free recreation pass for golf, bowling, etc.	3.94	3.70
62. Two free tickets to sports event or movie off base.	4.14	3.93
63. Free tickets for movie off base for whole work group.	3.85	3.52
64. Free VCR rental and two movies for one night.	3.99	3.59
65. Pool party for your work group and their families.	3.85	3.51
66. Two free theater tickets, sitter, and transport.	3.98	3.79

APPENDIX F (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY MARITAL STATUS)

Incentives	Not Married	Married
67. Getting free laundry service for one week.	3.99	3.60
68. Getting one day free babysitting.	3.54	3.36
69. Getting free haircuts for six months.	4.36	4.19
70. Four free phone calls (one 20 minute call/week).	4.43	4.16
71. Use of employment referral agency for your spouse.	3.84	3.87
72. Free round trip for two to a nearby big city.	4.35	3.89
73. Tour of work site for families of top workers.	3.39	2.96
74. Letter of recognition sent home to family.	3.90	3.35
75. Getting a ride in an Air Force jet.	4.58	4.17
76. Engraved model airplane or plaque.	4.09	3.83
77. Jacket with achievement patches or insignia.	3.86	3.61
78. Trophy for achievements at work.	3.86	3.54
79. Personalized pens, pencils, and coffee mugs.	3.79	3.54

APPENDIX F (Concluded): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY MARITAL STATUS)

Incentives	Not Married	Married
80. Certificate of achievement put in your file.	4.23	3.99
81. Wing Commander at your work station to commend you.	4.00	3.84
82. Having your photograph taken with the Wing Commander.	3.62	3.10
83. Outstanding performance notice sent to next base.	4.19	3.97
84. Special recognition in front of other personnel.	3.58	3.44
85. Having your name appear on list of "Top Workers".	3.70	3.45
86. Award and recognition bulletin board in work area.	3.48	3.28
87. Your unit appears on a list of "Top Units" on base.	3.98	3.77
88. Named one of the Wing's most outstanding personnel.	3.86	3.60

APPENDIX G: AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY DEPENDENT CHILDREN)

	Children	No Children
1. "Shadow" the squadron commander.	3.14	2.61
2. Meet a visiting dignitary.	3.24	2.94
3. Choose tasks you work on for one day.	3.78	3.42
4. Work in the group of your choice.	3.92	3.62
5. Choose shift you work on.	4.28	4.15
6. Meeting between the commander and your work group.	3.56	3.48
7. Avoiding involuntary cross-training.	4.27	4.17
8. Attending a workshop on career possibilities.	3.99	3.98
9. Getting first choice of training opportunities.	4.31	4.27
10. Serving as the informal instructor for new workers.	3.38	3.20
11. Field trip to see your specialty at another Air Force base.	3.73	3.16
12. Representing work group at meetings with supervisors.	3.44	3.44
13. Attending an Airmen/NCO breakfast.	3.17	3.03

APPENDIX G (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY DEPENDENT CHILDREN)

	Children	No Children
14. Participate in problem solving meetings at work.	3.62	3.62
15. Choice of assignment inside or outside of CONUS.	4.86	4.82
16. Choose next base of assignment within United States.	4.72	4.63
17. Choose country of assignment.	4.71	4.65
18. Take temporary duty of your choice.	4.51	4.27
19. Getting a day off for your work group.	4.30	4.11
20. Getting a half day off for your work group.	4.09	3.82
21. An hour off per day for work group for a week.	3.81	3.35
22. A day off not charged to your leave account.	4.34	4.02
23. A half day off not charged to your leave account.	4.11	3.73
24. An hour off per day for a week.	3.81	3.28
25. An extra half hour for lunch every day for a week.	3.83	3.34
26. Four time off hours to be taken whenever you want.	3.95	3.53

APPENDIX G (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY DEPENDENT CHILDREN)

	Children	No Children
27. Being excused from weekend work for one month.	3.92	3.48
28. No weekend work for work group for one month.	3.94	3.52
29. Work group lunch catered at your work place.	3.60	3.05
30. Check out a car from the motor pool for use on base.	3.39	2.82
31. Three day pass during the week (Tue., Wed., and Thurs.).	4.38	4.14
32. Getting a three day pass over the weekend.	3.90	3.34
33. A social event during duty time for your work group.	3.53	3.29
34. Picnic for work group and families during duty time.	3.53	3.44
35. Excused from extra duties for one month.	3.88	3.30
36. Work group excused from extra duties for one month.	3.88	3.48
37. Being allowed to live off base.	4.43	3.80
38. Access to base kitchen for "cook-your-own" nights.	3.24	2.37
39. Getting T-shirts with your work group insignia.	3.38	2.98

APPENDIX G (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY DEPENDENT CHILDREN)

	Children	No Children
40. Having your uniforms cleaned free for one month.	4.15	3.89
41. Getting a $20 gift certificate.	4.21	4.13
42. Technical training for college credit.	4.56	4.44
43. Attending an effective study habits program.	3.62	3.44
44. Attending a money management workshop.	3.54	3.28
45. Having a job search seminar for your spouse.	3.70	3.61
46. Job search seminar for personnel near retirement.	4.11	4.16
47. Free continuing education classes for family.	4.32	4.48
48. Defensive driver's training course for family.	3.71	3.64
49. Taking a foreign language course for free.	4.07	3.60
50. Having free foreign language instruction for family.	3.85	3.57
51. A course/workshop in developing parenting skills.	3.47	3.26
52. Attending a course/workshop in stress management.	3.64	3.54

APPENDIX G (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY DEPENDENT CHILDREN)

	Children	No Children
53. Attending a personal awareness seminar.	3.37	3.09
54. Attending a free personal grooming class.	3.01	2.23
55. Free dinner for two at an off base restaurant.	4.18	3.98
56. Having your photograph taken free.	3.40	2.66
57. Free item, i.e. athletic bag, sports watch, etc.	3.98	3.71
58. Have a weekend visitor stay at base dormitory free.	3.66	2.65
59. Getting use of a car for one weekend.	3.68	2.97
60. Free arts/crafts instruction such as photography.	3.74	3.40
61. Free recreation pass for golf, bowling, etc.	3.91	3.65
62. Two free tickets to sports event or movie off base.	4.10	3.90
63. Free tickets for movie off base for whole work group.	3.78	3.48
64. Free VCR rental and two movies for one night.	3.92	3.53
65. Pool party for your work group and their families.	3.75	3.49

APPENDIX G (Cont.): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY DEPENDENT CHILDREN)

	Children	No Children
66. Two free theater tickets, sitter, and transport.	3.90	3.80
67. Getting free laundry service for one week.	3.91	3.55
68. Getting one day free babysitting.	3.35	3.44
69. Getting free haircuts for six months.	4.34	4.16
70. Four free phone calls (one 20 minute call/week).	4.39	4.11
71. Use of employment referral agency for your spouse.	3.93	3.81
72. Free round trip for two to a nearby big city.	4.24	3.84
73. Tour of work site for families of top workers.	3.32	2.89
74. Letter of recognition sent home to family.	3.74	3.33
75. Getting a ride in an Air Force jet.	4.53	4.09
76. Engraved model airplane or plaque.	4.08	3.76
77. Jacket with achievement patches or insignia.	3.81	3.57
78. Trophy for achievements at work.	3.79	3.51

APPENDIX G (Concluded): AVERAGE INCENTIVE ATTRACTIVENESS RATING (BY DEPENDENT CHILDREN)

	Children	No Children
79. Personalized pens, pencils, and coffee mugs.	3.68	3.55
80. Certificate of achievement put in your file.	4.19	3.96
81. Wing Commander at your work station to commend you.	4.00	3.80
82. Having your photograph taken with the Wing Commander.	3.50	3.04
83. Outstanding performance notice sent to next base.	4.17	3.92
84. Special recognition in front of other personnel.	3.56	3.42
85. Having your name appear on list of "Top Workers".	3.65	3.41
86. Award and recognition bulletin board in work area.	3.44	3.26
87. Your unit appears on a list of "Top Units" on base.	3.91	3.77
88. Named one of the Wing's most outstanding personnel.	3.81	3.57

APPENDIX H: COPY OF INCENTIVE SURVEY INSTRUMENT

AIR FORCE

HUMAN RESOURCES

LABORATORY

UNITED STATES AIR FORCE
SURVEY OF INCENTIVES AND FORMS OF RECOGNITION
USAF SCN 86-03

MANPOWER AND PERSONNEL DIVISION
Brooks Air Force Base, Texas 78235-5601

AIR FORCE SYSTEMS COMMAND
BROOKS AIR FORCE BASE, TEXAS 78235-5601

DEPARTMENT OF THE AIR FORCE
AIR FORCE HUMAN RESOURCES LABORATORY (AFSC)
BROOKS AIR FORCE BASE, TEXAS 78235

REPLY TO
ATTN OF: MOD (Lt Longmire, AV240-3551)

SUBJECT: Survey of Incentives and Forms of Recognition

TO: Survey Respondents

1. You were selected at random from enlisted Air Force personnel worldwide to participate in this survey from the Air Force Human Resources Laboratory (AFHRL), Brooks Air Force Base, Texas. On this survey, you are asked to rate the attractiveness of various incentives and forms of recognition. Instructions for filling out the survey are given in the survey booklet.

2. The results of this survey will be used to develop a manual that can be used by Air Force commanders and managers to implement productivity enhancement programs which are based on incentives and forms of recognition.

3. You will not have to specifically identify yourself on the survey, so your answers will be completely anonymous.

4. If you have any questions, please contact Lt Kathy Longmire, AFHRL/MOD, Brooks AFB, TX 78235-5601, AV240-3551.

5. We appreciate your time and cooperation in completing this survey. Your careful completion of the survey will help make the result more accurate and comprehensive. When you have completed the survey please return the answer sheet only in the attached envelope to AFHRL.

FOR THE COMMANDER

Ronald L Kerchner

RONALD L. KERCHNER, Colonel, USAF
Chief, Manpower and Personnel Division

3 Atch
1. Survey Booklet
2. Answer Sheet
3. Addressed Envelope for Answer Sheet

SURVEY OF ATTITUDES TOWARD INCENTIVES AND FORMS OF RECOGNITION

SURVEY CONTROL # USAF SCN 86-03

PRIVACY ACT STATEMENT

In accordance with the Air Force Privacy Act Program, AFR 12-35, paragraph 8, the following information about this survey is provided:

a. Authority. 10 U. S. C., 8012, Secretary of the Air Force: Powers and Duties Delegation by.

b. Principal Purpose. Survey conducted to identify attractiveness of various incentives and forms of recognition for Air Force enlisted personnel.

c. Routine Use. The survey data will be converted to statistical information for use by Air Force commanders and managers in implementing productivity enhancement programs which are based on incentives and forms of recognition.

d. Participation in this survey is entirely voluntary.

e. No adverse action of any kind may be taken against any individual who elects not to participate in this survey.

INSTRUCTIONS FOR COMPLETING THE SURVEY OF ATTITUDES TOWARD INCENTIVES AND FORMS OF RECOGNITION

Part 1.

At the bottom of your answer sheet you will find a section marked "Numeric Grid." Before completing the survey please answer the following five questions by filling in the appropriate oval under each column.

To fill in the answer sheet, use a soft, number 2 pencil, and completely blacken the oval that fits your answer.

1. What is your marital status? (Column 1 in Numeric Grid)

Single = 0
Married = 1

(For example, if you are single you would fill in the zero oval under Column 1 in the Numeric Grid.)

2. Do you have dependent children living in your home? (Column 2)

No = 0
Yes = 1

3. What is your current rank? (Column 3)

Amn-SrA = 0
Sgt-SSgt = 1
TSgt-MSgt = 2

4. Under which command do you serve? (Column 4)

Tactical Air Command = 0
Strategic Air Command = 1
Military Airlift Command = 2
Air Training Command = 3
Air Force Logistics Command = 4
Air Force Systems Command = 5
Alaskan Air Forces = 6
Pacific Air Forces = 7
United States Air Forces in Europe = 8
Other = 9

5. Please indicate your gender by marking the appropriate oval in the section marked SEX (to the right of the Numeric Grid.)

Part 2.

Each of the following questions contains a different incentive or form of recognition that might be made available to Air Force personnel. You are to look at each one and rate it according to the following attractiveness scale:

Not At All Attractive	Slightly Attractive	Moderately Attractive	Very Attractive	Extremely Attractive
A	B	C	D	E

In other words, for each incentive listed, you are to decide how appealing it is to you and then fill in the box on the answer sheet with the letter that most closely fits how you feel about it.

Though most incentives will be applicable to your situation, it is expected that some will have little or no attractiveness to you. Those incentives are included because we are surveying a broad range of people, and some things you find not attractive, others may find very attractive.

Finally, several incentives refer to your "work group" receiving the incentive listed. Your work group is that most immediate group of people with whom you work. This would usually be the people in your unit that you would have face-to-face contact with every day.

DO NOT STAPLE OR OTHERWISE DAMAGE THE ANSWER SHEET AS THE ELECTRONIC SCANNER WILL NOT READ THE FORM, AND YOUR INPUT WILL BE REJECTED.

RATE THE FOLLOWING INCENTIVES AND FORMS OF RECOGNITION USING THE SCALE INDICATED BELOW:

Not At All Attractive	Slightly Attractive	Moderately Attractive	Very Attractive	Extremely Attractive
A	B	C	D	E

In answering the following questions, match the number on the answer sheet to the number on the survey for each incentive. When you have chosen the rating that most closely fits your feelings about the incentive, fill in the appropriate box on the answer sheet.

1. Being selected to "shadow" the squadron commander or other upper level manager for a day to get a more comprehensive view of the workings of the organization.

(For example, if you found this incentive to be "very attractive" you would blacken the box "D" in the row marked number 1 on the answer sheet.)

2. Meeting a visiting dignitary as a representative of base personnel.
3. Having complete choice of what tasks you work on for one day.
4. Being able to work in the group of your choice.
5. Being able to choose which shift you work on.
6. Having a meeting between the commander and your work group to discuss anything you want to.
7. Avoiding involuntary cross-training.
8. Attending a workshop on career possibilities in your career field.
9. Getting first choice, from those available, of appropriate training opportunities in your career field.
10. Serving as the informal instructor for newer workers.
11. Going on a field trip one weekend to see your specialty at work at another Air Force base.
12. Being a representative of your work group at meetings with supervisors to voice your work group's concerns or suggestions.
13. Attending an Airmen/NCO breakfast which would include feedback & items of mutual interest discussed in a semi-social atmosphere.
14. Getting the opportunity to participate in regular problem solving meetings at work.
15. Getting choice of assignment inside or outside of CONUS.

Not At All Attractive	**Slightly Attractive**	**Moderately Attractive**	**Very Attractive**	**Extremely Attractive**
A	**B**	**C**	**D**	**E**

16. Getting to choose a region of United States (e.g., East Coast, Midwest, etc.) where your next base of assignment is located.

17. Getting to choose country of assignment.

18. Being able to take temporary duty of your choice.

19. Getting a day off for your work group. (For example, half the group gets off one day, the other half gets off the next day.)

20. Getting a half day off for your work group.

21. Your work group getting an hour off from work at the beginning or end of each day for a week.

22. Getting a day off for yourself, which is not charged to your leave account.

23. Getting a half day off for yourself, which is not charged to your leave account.

24. Getting an hour off at the beginning or end of each day for a week.

25. Getting an extra half hour for lunch every day for a week.

26. Getting four free hours of time off during a month to be taken whenever you want.

27. Being excused from weekend work for one month.

28. Your work group being excused from weekend work for one month.

29. Having a work group lunch catered at your work place.

30. Being able to check out a car from the motor pool for use on base.

31. Getting a three day pass during the week (Tuesday, Wednesday, and Thursday).

32. Getting a three day pass over the weekend.

33. Having a social event during duty time for your work group.

34. Having a picnic for your work group and their families during duty time.

35. Being excused from extra duties such as cleaning, grass cutting, etc. for one month.

Not At All Attractive	Slightly Attractive	Moderately Attractive	Very Attractive	Extremely Attractive
A	B	C	D	E

36. Having your work group excused from extra duties such as cleaning, grass cutting, etc. for one month.

37. Being allowed to live off base.

38. Having access to the base kitchen for "cook-your-own" nights.

39. Getting T-shirts with your work group insignia.

40. Having your uniforms cleaned free for one month.

41. Getting a $20 gift certificate for use at a clothing store, BX, drycleaner, etc.

42. Getting greater opportunity for free technical training that is acceptable for college credit.

43. Attending an effective study habits program.

44. Attending a money management workshop.

45. Having a job search seminar for your spouse.

46. Having a job search seminar for military personnel approaching retirement.

47. Family members attending continuing education classes free or at reduced cost.

48. Having a defensive driver's training course for spouses and children.

49. Taking a foreign language course for free.

50. Having free foreign language instruction for family members.

51. Attending a course/workshop in developing parenting skills.

52. Attending a course/workshop in stress management.

53. Attending a personal awareness seminar.

54. Attending a free personal grooming class.

55. Getting a free dinner of your choice for two at an off base restaurant.

56. Having your photograph taken free.

57. Getting an athletic bag, sports watch, set of woodworking tools, or similar item for free.

Not At All Attractive	Slightly Attractive	Moderately Attractive	Very Attractive	Extremely Attractive
A	B	C	D	E

58. Being allowed to have a weekend visitor stay at the base dormitory for free.

59. Getting use of a car for one weekend.

60. Getting free arts/crafts instruction in areas such as photography, painting, etc.

61. Getting a free recreation pass for golf, bowling, etc.

62. Getting two free admission tickets to a local sports event or to a movie off base.

63. Your entire work group getting free tickets to go to a movie off base together.

64. Getting free video recorder rental and two movies for one night.

65. Having a pool party for your work group and their families.

66. Getting two free theater tickets to a play in town, with transportation there and back and free babysitting.

67. Getting free laundry service for one week.

68. Getting one day free babysitting.

69. Getting free haircuts for six months.

70. Getting free telephone calls home (One 20 minute call a week for four weeks).

71. Getting use of employment referral agency for your spouse.

72. Getting a free round trip for two to a nearby big city.

73. Having families of high performing units given a tour of the work site.

74. Having a letter of recognition sent home to family.

75. Getting a ride in an Air Force jet.

76. Receiving an engraved model airplane or plaque for high performance.

77. Getting a jacket with patches or insignia representing achievements.

78. Receiving a trophy for achievements at work.

79. Getting personalized pens, pencils, and coffee mugs for outstanding performance.

Not At All Attractive	Slightly Attractive	Moderately Attractive	Very Attractive	Extremely Attractive
A	B	C	D	E

80. Receiving a formal certificate of achievement from your supervisor and having it put in your permanent file.

81. Having the Wing Commander come to your work station to commend you for a job well done.

82. Having your photograph taken with the Wing Commander.

83. Having a special notice for outstanding performance sent to the Commanding Officer at next base of assignment.

84. Being singled out for special recognition in front of other personnel.

85. Having your name appear on list of "Top Workers" appearing in squadron area.

86. Having a bulletin board where awards and forms of recognition are posted in your work area.

87. Having your unit appear on a list of "Top Units" on base.

88. Being recognized formally as one of the Wing's most outstanding personnel at a quarterly, public ceremony.

Please list below any other attractive incentives or forms of recognition that you can think of.